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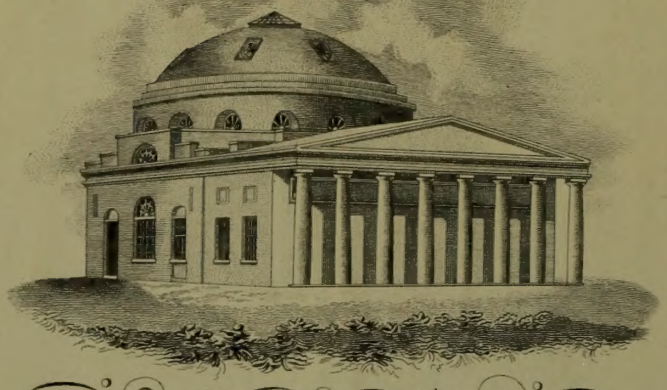

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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UNIVERSITY OF MARYLAND

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[1] Final page and final author/title of "Diet", volume 1884 (a), appear before title page.

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1851-1892; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

Author	Title	Notes
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Gibbs, Edmund C.	Reports of Clinical Cases	
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UNIVERSITY OF MARYLAND

THESES

1884(d)

Slade, H. Montrose	Diphtheria	26p.
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Becraft, Calvin E.	Anaesthesia in Labor	12p.
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Corkran, Millard F.	Etiology of Diseases	23p.
Carroll, Daniel C.	An Interesting Result of Malarial ~~Toxemia~~ Toxaemia (Poisoning)	20p.
Noble, Charles P.	The Kidneys and Their Secretion	25p.
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Abbott, Alexander C.	Uterine Hemorrhage	21p.
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Kirkpatrick, T. S.	Anatomy of the Heart	24p.
McCormick, James L.	Clinical Report	20p.
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Shefleton, F. J.	Diphtheria	35p.
Gibbs, Edmund C.	Reports of Clinical Cases	27p.
Berthold, J. L.	Reports of Clinical Cases	24p.

Thesis

by

H. M. Rod

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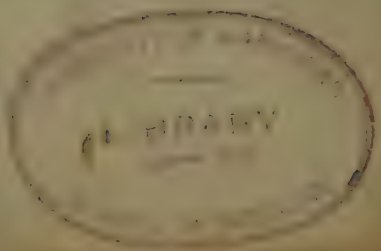

Scarlet Fever (Sm. latine Febris Rubra)

Definition — A contagious disease characterized by the appearance of a peculiar scarlet eruption and accompanied by the inflammation of the fauces and tonsils.

Cause and History

Scarlet fever was formerly confounded with measles but the two diseases are now recognized as separate and distinct. It is now general throughout the world, occurring either epidemically or sporadically and independently of [illegible] or climate. It is not limited to any age but occurs mostly in children, not because of any predisposition of the child to it, but [illegible] of the [illegible]

fectiousness most children are
exposed to it. It is [illegible] pro-
[illegible] [illegible] [illegible]
[illegible], [illegible] [illegible] [illegible]
by direct [illegible] [illegible] [illegible]
is reason to think it is also inoc-
ulable from the [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] the
infectious [illegible] of the patient is prob-
ably increased with the development
of the rash.

It is divided into various
forms by different writers e.g. Nor-
mal & abnormal (Villiet & Bartez)
Mild and Grave (Meigs). The vari-
ties most generally recognized
are: S. simplex, S. [illegible] and
S. [illegible]. The last and

most convenient division, however, as it seems to me is that of [illegible] which has been adopted by [illegible] [illegible] Smith in his work on [illegible]. According to this author the [illegible] is divided into the regular, irregular and [illegible] forms.

Symptoms

Regular form — Generally scarlet fever is [illegible] in its onset. Occasionally it is ushered in by a distinct chill. This is most common in the adult. Fever, usually high, comes on with its ordinary symptoms, head acts, anorexia, and thirst. The pulse [illegible] [illegible] reaching 110–120 per minute, and the temperature going up to 102 or 104°

the skin is hot and dry and the eyes congested. In the [illegible] a symptom of no little diagnostic value is present occurring generally, according to [illegible] previous to the rash. This is vomiting. In 117 cases recorded by that practitioner it was present in 7. The mildness of the disease is thought to be connected with the slightness or absence of this symptom. In the regular form of scarlet fever the bowels are generally constipated.

About the second day the rash appears being first seen about the lare neck and shoulders, and finally extending to the front and leg. The rash [illegible]

[illegible] of breathing [illegible] is [illegible] absent. ——————————

From the fourth to the sixth day of the disease the rash begins to disappear. With the fading of the rash comes the abatement of the febrile symptoms and a gradual decline of the disease. In the second week the rash finally disappears, as also the buccal and faucial inflammation, and the child rapidly returns to health. Then succeeds the period of desquamation, the exfoliation taking place over the whole body, but beginning about the face and neck. The degree of the desquamation is proportionate to the extent of the eruption. The epidermis

may come off in scales or in larger patches and is accompanied by [illegible]

The above is a brief sketch of scarlet fever when it pursues its normal course. Unfortunately, however, there is no disease that is followed by so many dangerous sequelae or has so many complications. The mildest cases are not unfrequently succeeded by the gravest results, which fact renders the prognosis always doubtful.

Irregular form. This form is of the due to some [illegible] the system, as entero cattle [illegible] ing phthisis. In such cases the rash is generally entirely absent or very

imperfectly developed [illegible]
[illegible] in connection with scarlet
fever do not as a rule change the
disease but themselves undergo modi-
fication. There may be some [illegible]
in the form of the disease, however, in
those who have [illegible]
[illegible]. In all second attacks there
is apt to be some irregularity in the
nature of the malady.

Mean form.

This form which occurs in some
epidemics is marked by very severe
nervous symptoms, the patient after
passing [illegible] a state of coma
and dying within [illegible] days.
The rash in this form is [illegible] pleat
in color and accompanied with

hemorrhage. Owing to the sluggish
[illegible] of the capillary circulation the
rash returns very slowly on the re-
moval of pressure. The temperature
is very high reaching from 102 to
107 and the pulse numbering 120 or
130 per minute. Convulsions may
carry off the patient before medical
aid can effect anything. Those who
survive the onset have severe pharyn-
gitis and adenitis accompanied by
purulent discharges. The chief dan-
ger in this form after the first
few days is from exhaustion.

Complications and Sequelae.

The complications of
scarlet fever are numerous, among
these [illegible] convulsions,

Diphtheria [illegible]
colitis and Rheumatism. The first
are most frequent in gran cases
and when occurring in the eruptive
stage give a very unfavorable prog-
nosis. They are doubtless due in a
great measure to the presence of
the [illegible] virus in the train.
Cancrum Oris may occur as a
complication or as a sequel. It is
generally fatal.
Entero colitis may antedate the dis-
ease or occur during its course, and
when present offers a very unfa-
vorable prognosis.
[illegible] which occurs mostly
in the mild forms begins at the decl-
of the fever. [illegible] the joints are

becomes swollen and injected, closing up the cavity of the tympanum. As the effusion collects and becomes purulent severe throbbing is felt followed at last by bursting and escape of the collection into the external ear. If the tympanum heals the hearing may be restored, but if the tumefaction of the membrane be followed by ulceration permanent deafness may follow. In another class of cases the inflammation extends from the ear into the brain and fatal convulsions or coma may follow.

Morbid Anatomy

The Syll anatomical lesions

In some epidemics the mortality is great in other slight. If the symptoms be mild the fever not too high and the eruption appears at the usual time we may safely predict a favorable termination. Death is usually the result of complications or sequelae. The most unfavorable symptoms are coma and convulsions. In all cases whether mild or severe it is far better to make a conditional prognosis until the patient is well advanced toward recovery.

Treatment. The principal indications in the treatment of scarlet fever are to sustain the

strength to reduce the temperature and to prevent complications. There is no specific against the scarlatinal virus. The patient should stay in the same room until the period of desquamation is at an end and should stay in bed until the fever and the rash have disappeared. The room should be properly ventilated and kept at an equable temperature. To reduce the heat of the body cold sponging is very valuable. In the complete stage inunction is an old and useful remedy to relieve the pungent heat

[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]

In the malignant form the
faucial complications demand
urgent treatment. Spraying
the throat with lime water
Carbolic acid, tincture of iron
and chlorate of potash will
be advantageous in removing
the secretions and thereby
relieving the embarrassed
respiration. In the nephritis
of scarlet fever digitalis
is perhaps the best diuretic
The hydragogue cathartics may
also be used with good re
sults in robust [illegible]
In the initial earache of otitis
the pain may be relieved by the
dropping into the [illegible]

[illegible] or [illegible] by the application of [illegible] to that organ.

Phylactic Treatment.

In epidemics the sick should be isolated and all contaminated articles removed and disinfected. Belladonna which was formerly vaunted as a most valuable preventive remedy has now fallen into disuse. Dr. Chew thinks however its employment in epidemics should not be neglected.

Respectfully submitted

W. F. Taylor

Gentlemen of the Faculty.

In the production of this paper I have drawn largely

on Dr. J. Lewis Smith's chapter on scarlet fever in his work on diseases of children. The medical professor doubtless expects little that is original, excepting perhaps original sin, from the average medical student.

If, in addition to the adoption of the author's views I have sometimes almost drifted into his phraseology, I beg your honorable body with pardon me on the ground of preoccupation.

Respectfully,
W. F. Taylor.

The use of anaesthetics in labor has become so universal that its legitimacy is established beyond dispute. Indeed, the relief of pain which it affords is so great that it offers a temptation which the obstetrician of the present day finds it difficult to guard against lest he may use it to excess and bring on such results as to more than counterbalance the evil in which it was given. Especially is this true of chloroform as it is the most efficacious means of assuaging pain & suffering and has such a marked tendency

to elimination thereby interfering with uterine contractions which may induce prolonged labor and retained leaves the patient predisposed to postpartum hemorrhage. Of the various agents employed for producing anaesthesia, ether has been most extensively used but of late years hydrate of chloral has come into considerable favor and seems destined to supersede chloroform in all cases where the induction of complete anesthesia is not required. This agent

unlike chloroform does not tend to lessen uterine force and on this account may be safely administered in the first stage of labor when chloroform is not admissible unless complete anaesthesia is desired as for purpose of reason and such its operations. Even in these cases we may not be able to stop its action at the desired point.
Chloral has not the power of chloroform in relieving pain but it will lessen sensation and do away with the acute grinding pains so

which amount is generally sufficient to produce the desired effect.

The only hindrance to the use of chloral rests upon the fact that in some individuals it has the tendency to produce nausea and vomiting but even this objection may be overcome by administering it in enemata. After the first stage of labor has been completed chloroform may be administered with comparative impunity if proper precautions be taken.

until the head is well
down upon the perineum
and the perineum is distended.
Prior to this stage in the
progress of delivery the
patient should be allowed
to come from under the influence
between the pains and be
able to hear what is addressed
to her and to converse.
Whenever complete anaesthesia
is desired the anaesthetic
should if possible be done
by another physician.
Chloroform in labor as well
as in general surgery is
contraindicated when there

judiciously administer sustenance hence by an earnest and faithful application of his faculties to such principles, and this is one of the duties of the physician, of what value the medical practitioner can be to his fellow men!

Then let the alimentary organs ever be objects of our most careful attention, remembering to instil into those with whom we come in contact the old maxim that an ounce of prevention is worth a pound of cure.

Very respectfully
[illegible]
[illegible]
[illegible]

Diet

by

W. J. Barton

Thesis by G G Morris. Penna.
to the honorable faculty of U of Md
Session 83-84.

Diphtheria

In considering the nature of diseases, diphtheria stands to me at the head of the list demanding the careful attention of the young practitioner.

It is an acute, specific, constitutional affection, both epidemic and contagious, and is distinguished by a disposition to the formation of false membranes, especially in the throat.

This is one of the oldest diseases, its history has been traced as far back as the second cen-

tury of the Christian era, and was described under the names of Ulcus Egyptiacum vel Syriacum. There is quite frequent mention of the disease from this period up to 1789 when the first full description of it was given by Dr. Bard. From that time, little attention was paid to it, untill 1818. when an epidemic occurred in Tours which called forth the treatise of Bretonneau in 1821. 25. and 26. in which was given the first precise notion of the disease, and bestowed upon it the term diphtherite whence originated the name diptheria.

The disease was again forgotten until 1855, when it appeared almost simultaneously in various parts of the globe. Since which time it has prevailed more or less extensively.

Pathology and Morbid Anatomy.

We find in this disease, as in many others, the general or local symptoms may predominate, giving a particular character to each case, and either being sufficiently violent to carry off our patients.

The mucous membrane of the fauces, pharynx, or that covering the tonsils, appears to be the primary seat of the characteristic local exudation

Upon inspecting the throat the first notable changes are redness and some swelling of the parts which indicate inflammation. This condition is soon followed by an exudation of a sero mucous transparent tenacious which soon becomes less transparent in spots and these spots soon coalesce giving the parts a whitish or glaish appearance. This indicates the presence of ulcers or the inflamed surface which is rarely confined to one point. It may extend step by step through continuity of structure until the whole mucous membrane within reach of the eye becomes involved and it may even

extend into the larynx and bronchial tubes, or into the nose through the posterior nares. Sometimes it is found on the conjunctiva, fissures around the nipples and anus, and on blistered surfaces. This concretion becomes thick, by layer after layer of flesh exudation beneath, untill it assumes a membranous consistency.

The membrane may be quite firm, tenaceous, and elastic, if the disease is of ordinary severity; but if it is of an asthenic type, with [illegible] inflammation, the membrane may be less firm, or even pulaaceous, never the less, the pellicle is present in some form or other; and it seems

to have the power of reproducing itself. When this pseudo membrane is first formed it is easily detached in shreads, but it soon becomes closely adherent to the subjacent mucous surface. If the pellicle should now be removed with the forceps the redness which appeared to be subdued by it reappears, and presents a raw and bleeding surface, which in a few hours time, is again covered with a new [illegible] of lymph. Chemically considered the pseudo-membrane consists of pure fibrin, but when examined microscopically it is found to consist of epithelium, granule cells, and there may be even pus corpuscles.

It has been stated that some of the lower of animal life exists in the membrane. Further investigation has shown that they are not an essential part of the affection.

The lymphatic glands of the neck, and especially those at the angle of the lower jaw, and under the sterno cleido mastoid muscle undergo a change. In the [illegible] majority of cases they become redder, more or less enlarged, painful and tender. The enlargement of these glands is, as a rule, in proportion to the severity of the local trouble in the

throat.

When the mucous membrane becomes sloughy, and the discharges from the pharynx evolve a fetid odor. The connective tissue in which these cervical glands are placed must be a source of the extensive destruction of serum, and even the exudation lymph, and in consequence of which there must be great and general swelling of the parts. Besides the changes already enumerated which show us that the kidneys and spleen are confected.

Clinical History.—

The disease usually begins

as in ordinary sore throat, with chilly sensations, headache, and some redness, swelling, and soreness of the throat, the constitutional symptoms being out of proportion to the local throat trouble. Sometimes the disease will vary in its development, so that the patient will not call our attention to the throat. The disease may present itself either in a mild or in a severe form.

The mild form of the disease is accompanied with slight fever, headache, and some anorexia, in other words a feeling of general

inflame.

The local symptoms are of little consequence, yet some uneasiness of the throat may be felt in deglutition, and a sense of tightness about the neck, and some embarrassment and hoarseness of the cervical glands. The pulse is frequent and compressible, and the tongue presents a whitish coat. The tonsils are increased in redness and size from the onset of the disease.

In a short time varying from a few hours to a few days there is perceived a peculiar white or whitish exudation on the tonsils

and fauces which rarely confines itself to these parts, but spreads to the neighboring mucous membrane. This mild form of the disease usually terminates in from six to ten days; but a short time before its termination, say after the first week from its beginning, no further exudation occurs, and it changes in color, which is soon followed by its separation in patches.

This stage of separation is one of importance, as it is at this time that the urine becomes albuminous. The patient is now convalescing which is slow and

tedious, or in-stead of continue-
ing to entire convalescence, he
may have a relapse, and prob-
ably a series of them, from
which he finally recovers, or
dies utterly exhausted.
In the severer form of the disease
we have quite a different appear-
ance. In this form the patient
may die from the constitutional
effect of the disease, or from the
extension of the local exudation.
There is a rapid and feeble pulse,
great dysphagia, livid [illegible], a
brownish coat on the tongue,
and the tonsils are very much
swollen, and covered with an

ash colored membrane.
The uvula and posterior wall of the pharynx are also covered with this false membrane.
Should the exudation extend into the larynx and small bronchial tubes there will be hoarseness, ringing cough, impeded breathing and imperfect aeration of the blood.
If the disease is not arrested these symptoms continue to increase in severity, the skin becomes [illegible]; the complexion assumes a pallid or dirty looking aspect and there is a liability to rapid prostration of the vital

powers.

In some cases the exudation extends upwards to the posterior nares, and into the nose, which is ascertained by carefully inspecting the pharynx, and seeing the membrane extend upwards. The mucous membrane of the nostril is seen to be irritated and reddened, producing coriza, which is often attended with a foul and acrid discharge from the nostrils. The respiration is still further impeded, and sometimes the upper lip around one or both nostrils is slightly reddened, occasionally this nasal diphtheria begins, sim-

ultaneously with the exudation in the throat, this is a very serious complication.

Sequelæ.—

The most common among the sequelæ of this disease is paralysis in some form or other; this is most frequently local. These consecutive symptoms occur after a brief period of convalescence, and this apparent recovery may vary from a few days to a few weeks.

The most common form of paralysis is that of the soft palate and pharyngeal arches, making itself apparent by a peculiar nasal intonation of the voice, and by a [illegible]

to regurgitation of liquids through the nostrils. These are usually the first symptoms, though they may be preceded by some difficulty in articulation, or by some impairment of the sense of taste at the base of the tongue.

In some cases the paralysis is more diffused and may affect the muscles of the extremities. Usually those of the lower extremities are first affected, followed by those of the upper.

The muscles of the bladder and alimentary canal may be paralyzed, causing retention of urine and fecal matter or only

[illegible] & these organs may be paralyzed, thus leading to involuntary discharge of urine and feces.

Further somewhat common and dangerous sequel is paralysis of the muscles of the heart. Its beats are slow and feeble, death taking place from the cessation of its action, or from the deposition of fibrin within its cavity or large vessels. The poison seems to act upon the nerves supplying the organ.

Impairment of vision is a very common sequel, being next in frequency to that of the velum.

[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]

[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [

affect both sexes alike. In others.

The susceptibility to the disease is not equal in all periods of life. Children are more frequently attacked with it than adults. The period of infancy varies from a few hours to eight days. The latter period being the greatest limit of duration.—

The presence of the characteristic local symptoms is the most positive evidence of the disease; prior to this the disease presents no distinctive traits. It being of

an ordinary sore-throat attended with the phenomena already enumerated under the clinical history.

But to look at the differential diagnosis of the disorder and here we find certain sources of error against which it is necessary to be on our guard.

In tonsillitis little yellowish or whitish spots are seen at the orifices of the follicles on the surface of the swollen gland. But these spots are confined to the tonsils and have no tendency to spread or to coalesce, also a superficial ulceration

is perceived when they are cast off. In the ordinary form of tonsillitis there is nothing that looks like a membrane. In Scarlatina the eruption is the chief point in making our diagnosis. An eruption is very rare in diptheria, and when it does occur it makes its appearance suddenly in patches, not deepening gradually in intensity, nor has it the punctated appearance peculiar to the scarlatinous eruption.

Another great point is that neither of the two diseases affords any immunity from

and one attack of scarlatina affords protection from a second attack; this not being so with diphtheria, rather a predisposition is established.

Membranous Croup is purely a local affection, having its seat in the larynx, and any involvement of the pharynx is secondary. the disease having to extend upwards, whereas in diphtheria, if the larynx becomes involved the morbid process must extend downwards.

Prognosis & Mortality.—

I would not abbrove of treating even a mild case of this disease

with indifference, however mild a case may be there is danger of bad results.

For the first week or eight days there is great danger of the extension of the exudative process to the larynx, and other parts, and any alteration in the natural breathing is suggestive of danger. Subsequently to this period death is to be feared from exhaustion and loss of vital energy.

The unfavorable symptoms are great enlargement of the glands of the neck, considerable deposit of albumen in the urine, excessive

vomiting and lumbrici which are not common. And extension of the exudation to the larynx and nares, or if it invades extensively to the buccal cavity.

The disease is more destructive in extreme youth than it is in advanced life. In the child ~~This~~ death is to be feared from the exudation extending into the larynx causing suffocation. In the adult death is most generally due to the severity of the general or constitutional affection.

The mortality differs immensely in different epidemics. Sometimes the disease is very light, while

on the other hand it may be extremely severe. The average mortality is about 33 per cent. but given cases as low as 10 per cent.

Treatment.—

As we are unacquainted with any specific capable of arresting the disease we must direct our treatment as the circumstances of the case demands.

In the first place we will loose no time in directing our attention to all hygienic rules necessary. The patients body and surroundings should be kept perfectly clean, the sick room freely

and unintermittently ventilated.
The patient quiet in bed, and as a protection for the other children of the family. They should be kept out of the room.
Strict attention should be paid to the patients diet. This is of the utmost importance. It should be nourishing, concentrated, easily digested, small in bulk, and embracing all the necessary variety of elements. Milk meets preeminently these requirements. Besides milk beef tea, broths and eggs may be given, which should be given in small quantities at short intervals. Stimulants are usually

demanded. In their administration the state of the pulse and skin is to be our guide. If the pulse be frequent and compressible and the skin cool, the stimulants should be increased. Six or eight ounces of Port or Sherry wine may be given to an adult in the 24 hrs. Should the pulse be firm & strong & skin hot which are rare alcoholic stimulants should be with-held.

A purgative is useful at the beginning of the disease merely as an evacuant. After this one merely want to keep the bowels in a soluble condition. Patients strength is to be sustained by tonics.

(1) remedies the best are the tinct.
of the chloride of iron and chlorate of
potass in combination ~~singly~~ or
alternating with each other.
The preference is given to the tinct.
of chloride of iron when but one is used.
dose gtts xx every three hrs.
Sometimes the perchloride of iron in
one grain doses dissolved in a little
syrup and water may be substituted
with advantage for the tinct of iron.
Quinine exerts no influence (specific)
over the disease but it may be
given as a tonic.
The local treatment. Great benefit
is derived from the application
of ice. allowing the patient to hold

it in the mouth.
If patient be not to young gargles may be used with advantage.
℞ gargle of permanganate ℞ potass gr. x to water ℥i. ℞ gargle may be used consisting ℞ chlorate ℞ potass. But the best way to make applications to the throat is by an atomizer. And one of the best applications is carbolic acid and lime water
Sulph. copper either in strong solution or in stick. or a strong solution of alum might occasionally be used with advantage.
Should the exudation within the larynx continue without ameliora-

time. Tracheotomy might be performed if the membrane has not extended too far into the windpipe, and the patient not too depressed. But the operation is anything but flattering.

For the nasal diphtheria. This is a very difficult complication to treat. The constitutional treatment is used more actively, and besides the nose should be kept perfectly clean by washes injected into the nostrils with a syringe. A good wash is a solution of Sulphite of soda 3i to water 3i. A wash of glycerine and water or salycilic acid may be used.

the injection should be made every two or three hours and carried well up the nostril, or by means of a curved tube placed through the mouth into the posterior nares.

For the palsy which remains Iron and cod liver oil, quinia and strychnia given hypodermically, in addition to the other remedies that have been given, and the hygienic treatment. If the paralyzed parts are accessible faradization may be employed.

A change of climate and scenery produce astonishing results in the way of improvement.

Geo. G. Morris.
Penna.

A Thesis

on

Etiology of Diseases

By

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Etiology of Diseases

The causes of diseases may conveniently be classed under two general heads: Predisposing and Exciting - Some authors, and with much propriety, have made other classifications; placeing all causes of diseases under three heads: Predisposing - Exciting & proximate. At present this is without fault, but probably in the near future when the primary causes are fully understood

it will be found that the proximate and exciting are synonimously used

Predisposing Causes:-

By Predisposing causes we mean those general, non-specific conditions which by their influence so modify the health of the system, or of parts of it, as to render them specially fertile to the development & growth of the germs of diseases

subjects the germs to be inoculated thereon.

Under predisposing causes we propose to discuss several conditions which we think bear somewhat upon the health of our subject -

First - Age - No close observer has failed to appreciate the relation of age to predisposition of disease - In other words, disease according to age -

In very early life

children are very susceptible to alimentary influences, and to disease of this viscera is the mortality of infantile life largely due.

Again, at this time and especially during first dentition Epileptiform convulsions are of frequent occurrence.

Rickets can only manifest itself during the growth of bone. Such diseases as chorea, Epilepsy, Cruse asthma, pseudo-hypertrophic paralysis are disproportionately before

manhood - Then we have the proneness to acute rheumatism scrofulous disease & worms of the alimentary canal -
Few special distinctions to disease mark the age of maturity - save such as are connected with differences of sex or habits of life -
But as the decline of life approaches and during its continuance - many disorders - such as are connected with decay and degeneration of tissue manifest themselves - Thus the

central nervous system becomes affected, and feebleness - loss of memory, or paralysis may supervene, - or changes in vascular system giving rise to dropsies - aneurisms - or Hemorrhage, or stomach liver - or kidneys may be deranged, accompanied by all the phenomena characteristic of such affections -

Second - Sex - The difference in the organization of sex

necessitates of course differ
ences in regard to certain
disease, such as are depen
dent on genitalia. But
aside from this there are
other affections - such
as Chlorosis Hysteria - and
nervous disorders, relating
to hysteria - found almost
exclusively in females -
while erythema nodosum,
exopthalmic Goitre, and Goitre
itself, is found more fre-
quent in females than in
males - of course some
of these latter may not be due
to sex alone

3rd Hereditary Predisposition is a very important influence over disease - It is not a constant or regular predisposition - Sometimes the disease of parents may be transmitted to all the children then again it only a part, or it may [illegible]
[illegible]
[illegible]
[

are of great service in the preservation and perfection of the child - Some of the most frequent predisposed or inherited diseases are - Idiocy Insanity - Epilepsy - Gout - Rheumatism - Tuberculosis - Scrofula - and Idiosyncrasies -

Fourth - Occupation has much to do with health - A person of sedentary occupation is liable to constipation - If exposed to cold and wet may become rheumatic or take on any disease common to exposure - or great heat may cause dysentery or diarrhoea

Fifth - Habits - This undoubtedly has caused as many deaths indirectly, as any thing that has been mentioned -

Indulgence in drink of alcohol has laid the foundation not only of the individual who thus indulged but of his immediate posterity - we are inclined to conclude that the suffering and woe which alcohol causes - more than counterbalances the good derived from it -

Eating to excess or of improper food is not without fault Indeed many of our dyspeptics have committed this gross error.

Often irregularity of labor is not unattended by evil results - nothing is better than labor when properly performed - but excess at one time followed by inactivity cannot fail to bring evil results - such as muscular relaxation - imperfect circulation inactivity of mind and improper secretions of glandular organs -

Fifth - Previous Disease -

Many of the exanthemata and allied affections are

it is true, protective again-
-st a subsequent attack,
yet at same time predis
posing to other disease,
while there are diseases
which while they do not
insure protection against
subsequent attack predis
pose most directly to
other disease - this last
may be shown in many
cases of pneumonia - the
sequale or predisposition
being phthisis - Other
repeated affections of a part
frequently predispose to
disease - many carsinomata

take their origin in fevers which have been frequently influenced

Seventh- There is a condition which some authors call "Epidemic Constitution" which varies during different years. Sydenham was first to employ this term. By it he meant a peculiar condition of atmosphere, determined by special telluric conditions. To this he attributed the cause of the development of such contagious diseases as Small Pox- Scarlet fever- Measles-

Yellow fever - and the plague
But with the advance
of pathology it is known
that no such phenomina can
take place but that diseases
do develop and spread by
actual contagion - Yet
it must be admitted that
there are times when
diseases not only contagious
but miasmatic and
inflammatory as well -
spread and prevail with
much more virulence than
at others - Whether this
is dependent on atmospheric
conditions of atmosphere or not

remains to be demonstrated by more minute research -

Exciting Causes:-

Many of the cited predisposing causes - cannot be solely classed with such causes - many of them are exciting causes - Heat and cold or ~~hunger~~ hunger and thirst may be direct causes of diseases -

Exciting causes may be divided into or classed under three heads -

Viz:- Mechanical - chemical & vital =

First Mechanical Causes:

Mechanical causes may be considered as Exopathic and Endopathic - Exopathic embrace all those causes which are brought to bear on the external surface While Endopathic apply to internal causes - Endopathic causes are of much importance to the physician - as they embrace all those conditions which relate to closure of orifices tubes and vessels - such

obstructions are of rare
found in bodies of Ped-
ency - as Cartwright -
[illegible]
[illegible]
[illegible]

Agencies of this kind are direct causes of disease

Second - Chemical causes - Most of the causes of this class belong to exopathic many of them act on the part to which they are applied - such as costic alkalies mineral acids. while most of them are absorbed and - act on remote parts - included in this class are opium - aconite atropia poison virous strychnia etc - other may be, and are absorbed

into the system be degrees as lead - phosphorous and ergot - Lead producing palsy - phosphorous - Necrosis of lower jaw - Ergot ergotism - sometimes poisonous articles of food - as mussels - and Sausages - when taken produce much discomfort and disease

Third - Vital Causes -
We now come to consider that important class of cases to which all

Contageous diseases owe their origin - causes which are specific for each specific disease: which are material which pass in some way from the affected infecting the non-infected - thus spreading from one to many producing great epidemics. It is evident that these causes are essentially and different from chemical and mechanical. It is impossible to conceive of a contageous strictured bowel or apoplectic clot - or contageousness of lead palsy or ergotism

[illegible] according
to present state of pathology
that cause need not be
classed under the head
of mechanical causes —
Most or many of vital
causes are not contageous
that is communicable from
one person to other — but
a person exposed to
malarial districts are very
liable to contract malarial
poisoning which will
sooner or later manifest
itself by some of its

characteristic phenomena—
Often again—when part of
the body is diseased the
disease tends to spread
involving the whole system
Infection by contiguity—
such diseases as cancer
may be put under
this head — This diffusi
-on through the system
is generally accounted for
by prolific particles or pri
mary growth— But the
cause of the primary
lesion is not yet scien
tifically accounted for—
There is but little doubt

had with our present
convenience of experimenting
and investigating. Many
of the Causes which are
classed as vital will soon
be understood and be
placed under the heading
of Mechanical or Chemical
Causes And the diseases
to which they give rise
be specifically treated.

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An Interesting Report of Malarial Toxaemia

An essay for the degree of Doctor of Medicine in the University of Maryland School of Medicine Session of 1883-4

By

Daniel Charles Carroll
of Arkansas

An Interesting Result of Malarial Poisoning

In writing a thesis, the young aspirant for medical honors is compelled in order to present something creditable, to resort to that despicable practice of Plagiarism. It cannot well be otherwise however, as in this country the short time which the average student of medicine devotes to obtaining the knowledge sufficient to secure his degree, affords him little opportunity for that deep and close study of disease by which anything new or original could be learned. Anything new in the Etiology, Pathology, Symptomatology, diagnosis or treatment of disease is only observed by those who by long, careful and

intelligent study & labor for their own advancement in knowledge and for the further perfection of that science to which the best part of their lives is devoted. In presenting the subject I have chosen, I do not hope to startle the world by any new discovery or theory in regard to the ordinary results of Malarial poisoning viz: Remittent, Intermittent or Pernicious Remittent or Intermittent fever etc etc; but shall merely mention in an explicit manner the most important details of a form in which malarial poisoning presents itself very frequently in the river valleys of the Southern States and ordinarily known among physicians

in those regions as "Haematuria"
"Hemorrhagic Bilious Fever" or "Swamp
Fever." All that I shall say concern-
ing this disease, has been learned from
the observation of several cases under
my care; cases where the recovery of
all the patients prevented any post-
mortem examination and where there
was no opportunity to subject the dis-
charges to any chemical or microscopical
investigation. Though this disease, for
disease I shall calls it, has been known
for years among physicians of the south-
ern States, nothing but a mere men-
tion of it is to be found in our mod-
ern works on practice. Flint in his
edition of 1881 gives a short notice of

the disease under the name of "Haematuric Malarial fever" but seems to regard it in the light of a pernicious intermittent. The great mortality attending this form of malarial toxaemia, the severity and suddenness of the symptoms, the promptness with which measures to relieve them must be used and the treatment which is entirely distinct from that of remittent or intermittent pernicious fever; render this disease an important one and worthy a more accurate and comprehensive description than has been given it. In order to present in the most explicit manner the details of my subject, I shall adopt the classification most usually employed by authors on

practice beginning with

Definition

Hemorrhagic Bilious Fever or Malarial Hematuria is a disease of malarial origin occurring in the river valleys of the southern States and in other intensely malarial countries, characterized by a sudden and violent chill, followed by an intense degree of fever of a remittent type, by a remarkable discoloration of the urine and a succession of rigors at irregular intervals. Other symptoms of malarial poisoning are as a matter of course distinctly marked.

Causation

The indefinable something known as malaria, is to all observers of this disease

considered the sole cause. My one object is to bring before the reader a clear description of an affection of which Malaria is the cause, I shall not attempt to give an account of the cause of malaria itself. If I did attempt such a thing, the only result would be an enumeration of those conflicting theories that are by no means positive and which can be found in any of our modern text-books

Morbid Anatomy

The pathological changes in this disease are the same as those found in other malarial affections, with probably the addition of some change in the Kidneys which the absence of any results of investigation prevent me describing. Pronging of

the liver spleen and brain is found after death, with the presence of pigment deposits in these organs, especially the liver. An intense yellowness of the skin is seen after the second day of the attack, due in all probability to the presence in the cutaneous secretion of the same coloring matter that is seen principally in the urine, and which appears from the opinion of most practitioners who have observed this disease, to be the coloring matter of the blood held in solution in the secretions.
In proof of this, a medical friend lately writing to me on the subject says "I have sometimes bled patients and found the same dark coloring matter

in the serum" This peculiar coloring of the skin and internal organs, would seem to denote that the red corpuscles of the blood, becoming from the action of the poisoning, broken down and disorganized, on reaching the tissues through the capillary circulation, yield their coloring matter to be absorbed by the surrounding tissues. Hence the discoloration always seen seen in the urine and skin and frequently in the alvine discharges. In the absence of the results of microscopical investigations, I am not prepared to discuss what part the bile plays in these changes, but will until I can speak with more certainty on the subject infer that in the blood

and not to the bile or the liver or we to look for these results of toxic action of malarial.

Symptoms

The disease generally occurs during the long continued attacks of intermittent fever so common in malarial regions. The patient has on his accustomed day a severe chill, and on urinating some hour or two after, he discovers that his urine is "bloody" The fever generally begins as usual in intermittent, but instead of abating and disappearing at the usual time continues and assumes the remittent type. The urine becomes darker at each evacuation and in a few hours reaches the color of port wine or darker. It is bordered

with little or no pain and at intervals of about an hour. There is generally a sense of pain or dull aching especially referable to the lumbar region. Constipation is generally present at first. The temperature does not have the regular exacerbations of remittent fever but rises and falls at irregular intervals generally reaching the maximum about the fourth day. The pulse is from the beginning quick, soft and weak sometimes reaching 140 beats per minute. The intense yellowness of the skin mentioned before comes on about the second day and continues throughout and long after convalescence has been established. There is always loss of appe-

the lungs. I have not seen that intense thirst and nausea in this disease, so common in remittent fever. In cases which recover there is generally no delirium, though is always a marked stupor and apathy even in mild cases. This stupor and apathy is seen from 24 to 36 hours after the attack and when it approaches a degree bordering on coma, is a symptom of much gravity An important symptom in this affection, is the occurrence from 3 to 9 hours after the attack, of a rigor or succession of rigors in which the patient seems to undergo the most intense suffering, exclaiming that they will break to pieces and protesting

you to press on their joints especially their hips, which pressure by the way affords them some relief. These rigors are of only a few moments duration and patients rarely experience more than two or three. When more than one occurs there is usually an interval of an hour or so between them. Rigors rarely occur after the first 12 hours. In cases pursuing a favorable course, the urine begins to clear up on the third day, sometimes becoming clear at the expense, as it were, of the alvine discharges, which often assume the same dark red color. The fever abates gradually with a corresponding slowing of the pulse and the patient comes out

of its stupid condition, beginning to take an interest in his accounts if in nothing else. The appetite and strength are only regained after the lapse of many days, convalescence being slow and tedious. The advent of delirium, increase of temperature and pulse rate, the retention or scanty avoidance of urine, and marked signs of coma, are symptoms pointing to an unfavorable termination. The average duration of the disease is about five days, that is the acute symptoms and fever subside at that time.

Diagnosis

The only disease which liable to be mistaken for Hemorrhagic bilious fever

is Yellow fever and the points of distinction are really difficult to determine. In the constancy of the bloody urine in Haematuria we have an important point of distinction from Yellow fever and vice versa of the black vomit which is not at all or rarely seen in the former. The temperature and pulse in the former is higher and more rapid than in the latter. In the latter disease there are convulsions, in the former they do not frequently occur. In Yellow fever there are various hemorrhages apart from the kidneys and bowels, as from the nose eyes or ears etc: in Haematuria these do not occur. In Haematuria I have not observed the flushed face

that Flint ascribes to remittent fever.
Of course the absence of any epidemic influence or the exclusion of any liability of the patient to previous exposure in an area affected with yellow fever, are points to be considered in making the diagnosis.

Prognosis.

I am not prepared to speak at length of the mortality attending this affection. It is to be always considered a grave affection, and physicians are slow in giving a favorable prognosis on account more especially of the frequent relapses which occur with generally fatal results. I have mentioned under the head of Symptoms this

changes which point to a favorable termination as well as those which indicate a fatal one.

Treatment.

The principal objects in treatment are to counteract the malarial poisoning and to eliminate the morbid products and deposits caused by the disorganized and broken down condition of the blood. There is much difference of opinion in regard to the use of quinia, some prominent practitioners having discarded its use altogether. In my opinion it should invariable form an important part of the treatment especially at the commencement of the attack. My method is to begin at once on seeing my

patient with 2 gr doses every two hours, continuing it until full cinchonism is produced; then either discontinue its use or give it at longer intervals throughout the attack. To overcome constipation and to further elimination calomel in single doses of 5 or 6 grains should be administered, though this practice is strongly argued against by many physicians whose experience is extensive. Diuretics and cathartics would seem to be about the best eliminative treatment. Fluid extract of Buchu and Hyposulphite of soda are found most efficacious remedies for this purpose, 40 drops of the former and 30 or 40 grains of the latter every

two years. This combination having afforded excellent results among many other plans of treatment proposed. The Hyposulphite of soda from its great diffusibility and the presence in it of Sulphurous acid is supposed to act as a solvent of the morbid elements in the blood and render them more readily thrown off by the excretory organs. This combination of remedies should be continued until the urine and the alvine discharges assume their normal color or rather, lose their abnormal color of dark red blood, and until the frequency of urination or amt discharged becomes normal. It is best to withdraw them gradually. The regions are

rarely seen after convalescence has been produced and require no other remedy than quinia administered in the way that I have indicated. The fever should be controlled not by such weakening remedies as aconite or veratrum viride, but by digitalis in connection with quinia. Fluid extract of digitalis in doses of 5 to 10 drops every two hours keeps the temperature under control and restores a weak and rapid pulse in a most excellent manner. Other symptoms require special treatment as they arise and need not be alluded to here. Patients as they can retain food or be made to partake of it should be fed on milk

nutritive diet. During convalescence Iron and nux vomica are the best remedies to restore appetite, digestion and strength. They are best given in 10 or 15 drop doses of each three times a day. Change of air is to be recommended to convalescents and tonics as those just referred to should be kept up for several weeks

The Kidneys and Their Secretion.

Charles P. Noble.

The Kidneys and their Secretion

We will first consider the anatomy of the kidneys, briefly, and then proceed to our more immediate subject, their secretion.

Anatomy. — The kidneys are two in number and are situated on each side of the spinal column in the lumbar region. The right occupies a little lower level than the left in consequence of the downward projection of the liver. Each kidney is about four inches in length, two in breadth, and one in thickness. The anterior surface is convex and covered by peritoneum; the posterior surface is slightly flattened. The internal border is

convex, & hilus, the internal is concave. The hilus presents a fissure near its centre, called the sinus, & which opens into a cavity, called the sinus. The renal vessels, nerves, lymphatics, and ureter pass through each hilus to gain entrance to the kidneys.

The ureters, two in number, are muscular membranous tubes, which serve to convey the urine from the kidneys to the bladder.

A kidney is divided into two portions. The first is the dilation of the upper extremity of the ureter, and consists of a pelvis, calices, and infundibula. The second is again divided into two portions, an outer

or cortical, and an inner or medullary. These portions make up the kidney proper. The medullary portion is composed of pyramidal masses, called pyramids of Malpighi, which open by their apices into the calices. These pyramids consist, principally, of straight tubes, which convey the urine from the glomeruli and tubuli contorti — hereafter to be described — to the calices, and hence through the infundibula, pelvis and ureter it is conveyed to the bladder. The pyramids are pale in color. The cortical portion is external to this, and is covered by a fibrous sheath. The fibrous tissue consists of dense

fibrous tissue, which is loosely attached to the cortical substance. At the hilum it is reflected inwards, lines the sinus and becomes continuous with the fibrous coat of the vessels and calices. The cortical substance, however, is of a reddish brown color, is soft, granular, and easily broken down. We have said that the internal portion of a kidney is made up of pyramids, and that the cortical portion lay external to this, but within the capsule. From this it will be seen that there must be two parts to the cortical substance; one between the sides of adjacent pyramids, called Columns of Bertini; the other, between the bases of the Mal-

pighian pyramids and the capsule, called cortical arches, because they overarch the interpyramidal columns. The cortical portion is made up of bloodvessels, nerves, lymphatics; of convoluted and straight tubes, the tubuli uriniferi and of little masses, the Malpighian bodies.

Minute Anatomy. — The Malpighian bodies are of a deep red color, and are about 1/50th of an inch in diameter. They are scattered through the columns of Berlin, but are arranged in double rows in the cortical arches. Each of these bodies consists of an investing membrane continuous with an uriniferous tubule, the Malpighian capsule;

and a glomerulus of bloodvessels, the Malpighian tuft. This is contained within the capsule, and is formed by an artery, the afferent, piercing the capsule and breaking up into capillaries which, themselves, unite to form another artery, the efferent. This pierces the capsule, anastomoses with other efferents near, and assists in the formation of a plexus around adjacent contorted tubules. The Malpighian capsule consists of basement membrane, lined with cubical epithelium, which is reflected over the vascular tuft. Hence everything which passes from the capillaries to the tubules, must pass through these cells.

The Tubuli Uniferi. — These extend from

the Malpighian bodies to the tubules. Soon after they issue from the glomeruli they become tortuous, and are called tubuli contorti. Portions of them become smaller, dip down through the cortical portion into the Medullary, then slightly enlarge, return to the cortical portion, again become convoluted, and enter the straight or collecting tubes. These tubes are known as the looped tubes of Henle. Others of the convoluted tubes pass more directly to the tubuli recti. The tubuli recti begin near the capsules, pass through the cortical portion, through the medullary, anastomosing here at acute angles with other straight tubes, and finally empty into the calices at the papillae of the Malpighian pyramids. The

tubuli rectiti and looped tubes of Henle in emptying into the tubuli recti form pyramids, having their bases directed towards the capsule, the pyramids of Ferrein.

The tubuli uriniferi consist of a basement membrane lined with epithelium. That lining the tubuli recti is cylindrical, that lining the ascending or larger limb of the looped tubes of Henle, and that in the tubuli recti, is cuboidal; while that in the descending limb of Henle's tubes is of the squamous variety.

The glomeruli and tubuli uriniferi are the secreting parts of the kidney.

Blood-vessels. — The kidney has a large blood supply, furnished by the renal artery. This, as much as the abdominal aorta, sup-

the sinus through the helium, and then divides into four or five branches. These give off small branches for the nutrition of the contiguous structures, and end in the arteriae propriae renales, which make their entrance into the kidney proper through the columns of Bertini. Two of the proper arteries run along the side of each Malpighian pyramid, giving off afferents to the glomeruli as they proceed. Having reached the bases of the pyramids, the vessels make an abrupt turn in their course and pass along them. Here they give off two sets of vessels. The first set, called arteriae interlobulares, arise at right angles to the proper arteries; pass outward between the pyramids of Ferrein;

furnish the glomeruli with afferents; and terminate in the stellate plexus under the capsule. The second set pass directly to the papillae and terminate in the plexuses around them. They are called arteriolae rectae; and supply the Malpighian pyramids with blood.

The Renal Veins arise from three sources. First, from the stellate plexus under the capsule. The veins in this situation unite to form the venae interlobulares which pass between the pyramids of Ferrein to reach the proper veins. Second from the plexuses around the tubuli contorti. These veins empty into the interlobular veins. Third from the plexuses around the papillae. The venae rectae

rise here, and pass directly through the pyramids to the proper veins. The [illegible] are formed by the junction of the straight and interlobular veins. They accompany the arteries along the bases and sides of the [illegible] pyramids to the veins. Here they anastomosis with other proper veins and form a Renal Vein in each kidney. This passes out through the hilum and empties into the vena cava ascendens.

The veins of the kidneys are formed from the Sympathetic system.

Scattered through the substance of the kidneys, between the tubules and glomeruli, is a certain, though small, [illegible] tissue.

Composition and Sources of Urine. — Before passing to the consideration of the process by which urine is eliminated from the system, it may be well to examine somewhat into its composition and sources.

The urine is a complex fluid, containing in great part the final results of the metabolism of the proximate elements of the food; and the proximate waste of the body, plus non-nitrogenous bodies, water, inorganic salts, pigments, a ferment, and gases. It is a clear amber colored liquid, having an acid reaction, and a peculiar odor.

Water. — When water is taken into the body, it, like all other substances, is used

yielded in the land of life, the continuous change. Hence the water we take in to-day must be thrown out and its place taken by the water of to-morrow. It is partly eliminated by the kidneys and thus we find it present in the urine. It serves also to dissolve the urinary salts.

Inorganic Salts. - The most abundant salt is sodium chloride. Others, as calcium and magnesium phosphate, potassium and sodium sulphate, and calcium chloride are found. The observation made concerning water might be repeated here; and although we cannot see why one molecule of sodium chloride or sulphate, or of a phos-

[illegible] cannot supply the place of another in the economy, yet we must admit the fact, for otherwise the labor of excreting this matter and taking in new, to supply its place, would not be thrown upon the individual. In some manner, through the life processes, these salts become waste matter, and are removed from the system. The salts exist in the urine in solution, and the acidity of the urine is due to acid sodium phosphate.

Nitrogenous Substances. — These are derivatives of the metabolism of the proteids of the body and food. The most important is urea; then uric acid. Small quantities

of Kreatinin, xanthin, hippuric acid, and other substances, are present.

The process by which proteid food nourishes the tissues; supplies force; becomes waste; and is thrown out of the body as urea, is in great part unknown. The same is true of the series of changes, which result in the production of urea from the activity and wear of the proteid tissues themselves.

From various considerations, upon which lack of space forbids us to enter, it seems probable that Kreatin is one of the chief sources of urea. Kreatin is always found in nervous, muscular, and splenic tissue. On this account and for the reason that kreatin is a very diffusible

substance, passing readily into the blood, it is fair to conclude that kreatin is a product of the activity of these tissues. It is thought by some that the kreatin constantly passes into the blood; and is carried by it to the plexus around the contorted tubules of the kidney; and that it is here seized upon by the epithelium of these tubules and converted into urea. This is not finally decided however.

It may be that some of the kreatin goes to the liver, and is there converted into urea. We will see that there are good grounds for believing, an analogous change takes place, in the liver, in the leucin of digestion.

Leucin is thought to be the other un-

mediate source of urea; Leucin is formed in the intestine in Pancreatic digestion. A great part of it is probably absorbed and carried to the liver. Here it goes through intricate chemical processes which result in the formation of urea and some non-nitrogenous substance. This either becomes elaborated into fat, or oxidized into Carbon dioxide. Some Physiologists think that glycogen is the non-nitrogenous product of this or a similar reaction. There are two principal proofs that leucin becomes converted into urea. First, when a large amount of leucin is received into the intestine, no additional amount appears in the urine; while the percentage of urea

is largely increased. Second, in acute atrophy of the liver, the urea, in the urine, is replaced by leucine and tyrosine.

In concluding this part of our subject we may say, with great probability, that a part of the urea, of urine, is formed in the liver, from leucine, possibly, also, from kreatine and tyrosine, and is simply excreted from the blood by the renal epithelium; while the remainder is the direct result of the activity of the epithelium cells in converting kreatine into urea.

We must omit the consideration of the other nitrogenous substances.

The non nitrogenous bodies exist in the urine in small amount and belong to the organic acids

The history of the urinary pigments is very obscure. Urochrome is always present. There may be others.

The ferments of urine are both enzymolytic and proteolytic. They are obtained by treating urine with alcohol, and making an aqueous extract of the precipitate thus formed. They are probably derived from the digestive juices.

The urine contains small amounts of nitrogen and carbon dioxide gases.

The Secretion of Urine. — There have been various theories as to the secretion of urine, but at the present day there are only two to consider. The first sets forth that the water, with some dissolved salts is filtered through the renal glomeruli; while urea, uric acid and sodium chloride are

are secreted by the glandular pithelium lining the tubuli contorti. The second differs from the first in claiming that not only the urea and uric acid are secreted but also the water and salts; and that these are secreted by the cubical cells reflected upon the Malpighian tufts.

We will first consider the points of similarity in the two theories, and then their differences:

Heidenhain has shown that, with regard to indigo-carmine, the cells lining the tubuli contorti do exhibit secretory activity. He divided the cord below the medulla in an animal, thus causing a cessation of urinary secretion. Indigo-carmine was then injected into the animals veins. By killing the animal

and examining the tubules micro-scopically, he found that the substance was taken up by the cells, and was passed into the tubules. By varying the experiment he found that after a certain time the cells appeared exhausted and did their work imperfectly, just as does every other functioning organ. None of the material passed through the glomeruli.

Nussbaum has adduced evidence of the secretion of urea by the renal epithelium. In certain of the lower animals, the kidney has a double vascular supply. One set of vessels supplies the glomeruli; while the other carries blood to the plexus around the tubuli contorti. By tying the vessel supplying the glomeruli, their secretion is shut off. If now urea be injected into the blood a-

[illegible] secretion of urine takes place. From his experiments we can conclude that urea is secreted by the glandular cells, and that under some circumstances these cells can secrete water.

We now come to the consideration of the process by which the water of urine is eliminated. As we have seen, there are two theories concerning this; one that the water is simply filtered through the glomeruli, the other that it is secreted and not filtered. If the first be correct, the elimination of water would be solely due to blood pressure and would vary with this. If however the second be the correct theory, then the blood pressure becomes a secondary, though not unimportant, factor.

in the elimination process.

Since the blood pressure plays so important a part in urinary secretion, it will be used to examine briefly into the changes brought about by its variations.

It is found, that, when the blood-pressure in the Malpighian tufts is increased, either by increase of the general blood pressure, or by dilation of the renal artery without dilation in other parts, the flow of urine is increased. This conflicts with neither theory. On the other hand when the pressure is diminished in the glomerulid, whether by constriction of the renal artery or by lowering the general blood-pressure, the amount of urine eliminated is diminished. This also is in accordance with both theories.

section of the cord above the medulla causes an entire cessation of urinary secretion because of the low blood-pressure produced. Section of the renal nerves gives rise to polyuria and albuminuria.

If you clamp the renal artery for a time, and then remove the clamp, secretion is not at once established, and the first urine eliminated is small in quantity and highly albuminous. Now were the process of elimination simply one of filtration we should expect the normal, or even an increased, amount of water to pass as soon as the pressure was reëstablished. For when other vessels are injured, as by a thrombus,

they allow and increased transudation through them. We find a ready explanation of this fact in the "secretion" theory. When the artery is clamped the vessels are deprived of their blood-supply, and so the cells in the Malpighian bodies suffer, and are injured. Hence, we must a priori expect, that when the clamp was removed and circulation again established, the cells would function feebly and imperfectly. Thus the sense of mine secretes is obnoxious.

Charles P. Noble.

Fredericksburgh Md.,
Feby. 12th. 1884.

Cranial Injuries,
with a report of five cases.

J. F. Malone

I do not purpose speaking at much length of cranial injuries in general, but after a cursory notice, will pass on to the consideration of those cases which have come under my observation.

The importance of all head injuries of course depends upon whether the

brain be implicated, either at the time of the injury or subsequently.

The most common causes of brain injuries are fractures of the skull, but before treating of them, will speak of those injuries which may give rise to cerebral concussion.

Most any external violence either by a direct blow, or fall, or by counterstroke as from a fall on the feet, may cause concussion of the brain.

By concussion we

mean a shaking up, or tremefaction of the brain mass. If it be violent we may have contusion and laceration, which of course will be accompanied by extravasation of blood.

Symptoms of concussion:

In all cases there is at first shock, with small and frequent pulse, partial unconsciousness, and sometimes vomiting. The face is pallid, respiration feeble, and there is generally incontinence

of mine and feces.
Treatment.

Patient should be placed at rest, and absolute quiet enforced, may be necessary in some cases to use stimulants to bring about reaction. After reaction has set in, cold applications to the head should be employed, opium used internally, and the patient kept perfectly quiet. The bowels and bladder should also be attended to.

Fractures of the skull may

by penetrating or contusion. Rare to fracture external table and not internal except on frontal sinus. The internal or vitreous table alone is sometimes fractured. The outer never.

Fractures of the vault are generally caused by violence, while those of the base are usually from indirect violence or contrecoup.

The diagnosis of those of the base is rather difficult, but there are certain

signs which assist very materially in locating the injury. In fracture of the anterior fossa is followed by ecchymosis around the eyes, under the conjunctiva.

The middle fossa, in the petrous portion of the temporal bone is fractured there will be bleeding from the ear, and an escape of cerebro-spinal fluid.

A fracture in the basilar fossa is very hard to recognize.

The Processus in fra-

[illegible] of the [illegible]
[illegible] [illegible]
[illegible] [illegible]
[illegible]

meningitis. Lasts set in.
Symptoms.

The most prominent symptoms of compression are, coma or unconsciousness, slow and stertorous respiration, full pulse, retention of urine and feces, and paralysis of one side.

Treatment of traumatic meningitis and compression. — Lay patient flat with head elevated, and keep ice locally. Recommend counterirritation by means of blisters.

A free purge should be administered.

Diarrhœa, in small doses frequently repeated, is found to be efficacious in this condition. Nothing for depraved taste or diet is sometimes necessary.

The following cases of cranial injuries I had the opportunity of observing last summer. They are a very interesting series of cases. Fortunately,

I was unable to get a full record of some of them.

Case I.

Young Englishman 21 years of age. - a sailor.

Had fallen down the hold of a ship about 16 feet, striking back of head and producing a slight scalp wound. No indications of a fracture could be made out.

Patient had convulsions at short intervals and with marked severity, it being

almost impossible to hold him on bed during the paroxysms.

The diagnosis was concussion of the brain.

Was treated principally with Bromide of Potassium.

July 21st, two days after coming in Hospital, the convulsions were much reduced in frequency and severity, and by the 26th, they had ceased altogether.

Patient left Hospital about Aug. 1st apparently well.

Cover

Case II.

M. — adult male aet. 40. Was struck about 9 o'clock A.M. Aug. 7 by a locomotive, producing a long scalp wound over left parietal bone, with a comminuted fracture. Was brought to hospital an hour after the injury, entirely unconscious from symptoms present he was evidently suffering from compression.

Operation of trephining was performed at 2.30 P.M. without any anaesthetic.

One button of bone was removed and also a clot which had resulted from the rupture of an intra-cranial blood vessel.

After the operation his temperature was 107 3/5, pulse 104, and respiration 14.

Patient continued in an unconscious state, wild and almost unmanageable. After a time he became paralyzed on the right side. He died Sept 2nd. Post mortem examination showed general meningitis.

Case III.

Mrs. — aet. about 60. Struck on side (right) of head by hoofs of a horse. Brought in Hospital unconscious, and died shortly afterwards.

At Post mortem found large clots of blood mostly on opposite side of head. Base of skull was fractured at several places evidently from counter-stroke.

Case IV.

Joseph U.

aged about 60. Was struck on head with a piece of timber. When brought in hospital 24 hours after the injury, had the symptoms of compression. His history showed however that for some hours after the reception of the blow he had been perfectly conscious and able to move around as usual. Although struck on the back of the head, his left eye was ecchymosed. The transudation was around

the eye pale in the [illegible] conjunctival tissue, and also in the eye lids, occurring in the former place first however.
Patient continued in this in this condition for several days, with the more prominent symptoms of compression well marked, as coma, stertorous breathing, [illegible] of urine etc.
Finally died, and the autopsy showed a fissured fracture of left parietal and temporal bones

and of the supra-orbital plate of the frontal.

There was a considerable infiltration of blood into the periostium, and on opening the skull, large clots were found on membranes of brain of left side, and also an infiltration of blood within the middle lobe of the right hemisphere.

Case V.

Levi H. colored aged about 45. Was struck on frontal bone one and a half inches above

the left orbit with a stone
Sept. 5th During the two
following days patient
continued at his work as
usual; on the morning
of the 8th however (when
first seen) his condition
was changed. Was very rest-
less, had considerable fever
and complained of pain, but
was conscious.
On the following morning
the 9th, he was entirely un-
conscious, had a tempera-
ture of 103° with slow pulse.
At 7 P.M. of the same day
[illegible] set in, and

continued almost incessantly and with increased severity during the [illegible]
When seen at midnight his eyes were fixed, pupils insensible to light, deglutition impossible, decubitus dorsal, spin hot and [illegible] and his breathing slow and stertorous. The spasms occurred about every five minutes but the twitching of the muscles of the face were almost constant, especially of the right [illegible]
At 9 A.M. of the 10th when next seen he was in an

unconscious comatose condi-
tion, with complete paralysis
of the right side. And at
10 o'clock P.M. of the same
day he died, being the
fifth day from the reception
of the injury, and the
third after the commencement
of the symptoms of compres-
sion. The post mortem
examination, 12 hours af-
ter death, showed a slight
depressed fracture at the
point where the blow was
received. Both tables of
the bone were fractured,
the inner table however

was driven inwards, and the sharp edges of bone had been the occasion of the diffuse meningitis, which it was seen had prevailed. A considerable amount of serum was present, and greenish-yellow streaks of lymph could be seen on the arachnoid membrane and in the meshes of the pia mater.

J. L. Malone,
Chas.

Baltimore, Jan. 1st '84.
Students' building,
Room No. 5.

Uterine Hemorrhage.

Alex. C. Abbott

University of Maryland.

Pathological Uterine hemorrhage occurs as a symptom in three conditions of the organ.

First, in the unimpregnated organ.

Second, in the pregnant uterus.

Third, in the post parturient stage.

The conditions giving rise to hemorrhage during the first stage, are various, and some of the pronounced reasons for it will here be mentioned.

In the first place we sometimes notice a difference in quantity in the regular menstruation, it at one time being very slight or absent, while at another period it will be so excessive as seemingly to compensate for the former deficiency

these phenomena occurring without any assignable cause – we are inclined to call it 'Idiopathic' Hemorrhage.

The next cause to be mentioned while not giving rise to a perfect Hemorrhage, so alters the condition of the vessel walls as to render them incapable of retaining their contents and hence a transudation of watery and some corpuscular Elements takes place – The cause of this sanguineous discharge we call Chlorosis. This condition though more frequently at the root of Amenorrhoea, occasionally gives rise to this watery Exudation

The next factor that attracts our attention is the Submucous Fibroid, which gives rise to alarming Menorrhagia; or a Continuous Metrorrhagia the progression of which quickly reduces the woman to a mere state of existance in which she is helpless to herself and a burden to those around her.

It was my good fortune to see a case, illustrative of this, in the practice of my preceptor — A woman, who at her menstrual epochs was obliged to keep to her bed, for from ten to fourteen days, with such a constant flux that at the period of my

function, the periodical congestion is so increased as to rupture the vessel walls & hence the escape of blood. Notwithstanding the fact that by similar cause we have Metrorrhagia constantly present. One of the most most frequent causes, is the presence of Polypoid growths or fungosities within the cavity, with granulations, ulcerations, Exfoliations &c.

Now the nature of the organ, as we can readily comprehend, gives rise to these conditions. Its frequent congestions and anaemia seen when performing its normal function readily predispose it liming

membrane to a hypertrophic action, and this increase and decrease of nutrition causes the above mentioned granulations, fungosities &c.

These growths when once having matured upon the congested mucous membrane, by their presence excite a flux from the already existing leucorrhoeic tendency.

Polypoid growths are also seen accompanying subinvolution of the Uterus due to laceration of the cervix. In fact they are most often seen as as a complication of some other trouble in the organ — as some exaggeration of the monthly congestion, &c.

Flexions and Malpositions of the Uterus are also causes of hemorrhage. By the torsion & flexion they bring to bear upon the vessels returning blood from the organ they cause a passive congestion. This stagnation interferes with the proper nutrition to the vessel walls and hence they are unable to hold their contents — and because of the fibroid induration accompanying passive hyperaemia, we have spontaneous stoppage of the hemorrhage prevented — for the vessels can not retract after division or laceration.

There is one other cause of Uterine

hemorrhage, that from the period at which it occurs may be diagnosed almost to a certainty - I refer to Carcinoma & Sarcoma. In corroboration of this I quote the axiom - "That if a woman who has normally ceased to menstruate, begins to bleed, always suspect cancer."

There are other causes, as ovaritis, pericitonitis inflammation, organic lesions cystic degeneration of ovary especially in first stage &c But as they are rarely seen, they will not be taken up.

Next we have hemorrhage in the Pregnant Uterus. Here we have a division into accidental and Unavoidable

Hemorrhage.

When from any cause the placenta is separated from the uterine attachment, necessarily there must be a greater or less loss of blood from the open sinuses. The blood may pass down between the membranes and the decidua & escape externally; thus directing our attention to the accident, or it may not find exit, and collect within the cavity, causing intense pain to the mother and nervous & frequently fatal injury to the child.

The cause of accidental hemorrhage is usually some dyscrasia on part of the mother combined with

external violence, as blows, falls &c.
which latter readily detach the
placenta from its weak attachment.
Women who have from many children
& who are subject to irregular & strong
contractions of uterus before labor
are the subjects who suffer from this
accident.

Under the head of Unavoidable Hemorrhage
comes that alarming and distressing
condition known as Placenta Praevia.
Different theories have been advanced
for the origin of the hemorrhage in
this abnormality - but the one
now generally accepted and the
only one that seems reasonable
is that it comes from the [illegible]

of the Utero-Placental Sinuses made patent by the contractions of the uterus — and singular Enough this same uterine contraction while it causes the Hemorhage, is at the same time, the only reliable means we have for arresting it. We need have Hemorhage occurring after labor. Post Partum Hemorhage due usually to the improper conduction of the third stage of labor — by improper, I mean that the placenta has either been not completely delivered or that it has been delivered by traction upon the cord, instead of by the expressive method.

Now the reason for hemorrhage when the placenta is delivered by traction is perfectly plain for here it would be pulled away from the open vessels before they could be closed by contraction of the organ, whereas, when it is delivered by expression the contracting uterus shuts itself together and as it were sheds the placenta off, each sinus being closed as the organ is reduced in size.
The return of the uterus to its normal size may be interfered with by various means. This condition is known as Subinvolution.
One of most constant factors in

checking the normal return of the uterus is a laceration of the cervix. But we do not mean to say that every laceration causes subinvolution nor that every severe laceration causes it, for were we to make such a statement we would go wide of facts because the experience of the profession goes to show that only occasionally do we find a true subinvolution; Simpson only having seen three in his great practice.

But whenever occurring, hemorrhage is always an accompaniment because of the loose flabby condition of uterine walls not checking the

diminishes by contraction, but only by the very unreliable (in this locality) thrombus, which is readily detached.

Metritis, Fatigue of organ due to multiple pregnancy, abortions etc are causes of Subinvolution.

The Last and a very common Cause of Lemonhage in the post parturient uterus is Retained Secundines. This comprises the whole or portions of the placenta or the membranes, that have not been removed from the cavity.

In this condition the Lemonhage is caused by interference with the normal retractility of

the organ + hence proper closure of the open vessels is interfered with.

Occasionally these retained particles become organized and then have the same action as was spoken of in connection with fungous + polypi etc or they may disintegrate and act as a fertile cause of septic infection.

There are other causes for an escape of blood from this organ such as Solution of Continuity by mechanical + accidental means, but they will not be mentioned as the above are the ones most commonly seen.

Now to diagnose these conditions differentiation is required, it takes no skill to assure ourselves that the blood is flowing, but why does it flow & whence comes it? are the questions to be answered.

It is not so easy to decide whether we are to treat Menorhagia or Metrorhagia; whether Menorhagia is Symptomatic or Idiopathic, passive or active.

Age, is always to be considered as predisposing to abnormal escape of blood from the uterus — We see Metrorhagia occurring as a remarkable phenomenon of the Menopause, Probably called

Metrorhagia because of its irregular appearance which we always see at the cessation of the periodic discharge.

Active & Passive Metrorhagia are differentiated by both the local and constitutional condition of patient.

The former being seen in the plethoric the latter in the Scrofulous woman.

These cases are treated as the condition indicates — thus, in the plethoric female — depletion, reclination of Cardiac force & lessening of arterial tension, saline purgatives & Sitz baths are indicated. But none of these

Means would be proper in a weak, delicate woman with loose lax muscular fibre, here we see tonics, stimulants, good food, fresh air, moderate exercise &c called for — In other words promote nutrition & assimilation & the disease will take care of itself.

Temporarily, astringent tampons may be necessary — but ordinarily after a course of constitutional treatment they recover.

Ergot may in the unimpregnated condition accompany the tampon.

Symptomatic Leucorrhoea is in many cases easy of diagnosis

For instance if upon introduction of the sound, it is deflected to one or other side, while at the same time one side of uterus is larger than the other we will be pretty safe in diagnosing a submucous or interstitial fibroid.

Or if upon digital examination we find the os open & patulous with a history of recent pregnancy we may attribute the hemorrhage to a retention of portions of the products of Conception.

By removal of these masses & cleansing out the uterus with some antiseptic, it may then retract to its normal size & check

the discharge.

Granulations, Carcinoma, Lacerations of Cervix &c may all be made out by digital & Speculum examination.

The Granulations are benefitted by course of stimulating alterations locally - as I. Iodine &c.

The Laceration may be treated by Emmet's Operation of Trachelorrhaphy.

The Carcinoma may be benefitted if operated upon early enough, but such an opportunity very rarely presents itself.

Hemorrhages during Pregnancy may be checked by keeping patient absolutely quiet - with local sedatives in ordinary cases but

where life is endangered then our only resort is to bring on premature labor and thus by lighting up toxic uterine contractions it may be checked.

Accidental hemorrhages in women with dyscrasia of any source or other are prevented by treating constitutional condition

William C. Bilbro,

Session of 1883 & 1884. Milton - Tenn.

a subject which must engage a large share of the attention of the physician and the surgeon.

It is continually the object of his treatment & care. All parts that are supplied with blood vessels are likely to become affected with it, and being more easily excited by external causes, it is therefore more common than any other disease the human frame is liable to.

Almost all the disorders to which the human frame is

from to; begin with inflammation, end in inflammation, or are accompanied by inflammation during some part of their course.

Most of the organic changes of the body recognize inflammation as their cause.

The greatest cause of premature extinction of human life is by far due to inflammation.

Again, inflammation is just as interesting as regards its healing results, as its morbid phenomina. It is through inflammation

that parts adhere together when
their adhesion is essential to
the preservation of the indi-
vidual.

"Inflammation, then, is a
morbid process of increased
activity in a part with al-
tered nutrition; accompanied
by redness, heat, swelling,
and pain."

No definition, however, can
be given that would embrace
all the forms in which inflam-
mation presents itself.

No useful account of it can
be given in the abstract; and
Therefore I shall sketch

the phenomena of inflammation under one of its most simple & common forms; and taking this as an example of the disease, proceed afterwards to trace its modifications and varieties.

Let us suppose, then, that I receive a local injury. In a short time I begin to have pain in the part, and this is soon succeeded by redness, and increased heat, and swelling.

The skin becomes of a bright red color, the swelling augments.

In the immediate place of the injury the swelling is firm & hard; and excessively tender. At some distance from the center, although there is some swelling, the parts are softer and more yielding.

In the seat of the redness and swelling I experience a sense of heat, a burning pain; the part is sensibly hotter than the surrounding parts; the blood going from the inflamed area is hotter than the blood going to it. The part, then, is said to be

in a state of inflammation. Let us see why all these morbid phaenomena; we will first take redness and see its cause.

The redness of inflammation must also be preternatural in degree, for many parts of the body are naturally red. This phaenomina depends upon the greater quantity of blood in the dilated vessels of the part; and sometimes also upon the extravasation of the corpuscular elements of the blood into the surrounding tissue.

That the vessels which naturally circulate blood are actually enlarged, there can be no doubt.

There is much variety in the tint of the redness of inflammation, depending upon the kind and degree of the inflamation, and on the nature of the part affected.

Sometimes the redness is bright scarlet, as if the part were filled with arterial blood. This generally happens in acute forms, and in the incipient stage of the inflammation.

Sometimes the redness is dark

or purplish; as if the parts were gorged with venous blood; This occurs in the cronic & sluggish forms of inflammation, and is often the case when there is a tendency to gangrene. Sometimes the redness is distinctly circumscribed, or comes in patches; and sometimes it is diffused in a general blush over a large surface.

Now, seeing that redness accompanies inflammation of the external parts, we could naturally presume that it exists also in internal inflammation: indeed, we may convince

ourselves that it is so.
We see also that parts are
left red after death, which
parts we have other reasons
for knowing had been inflam-
ed during life; and we in-
fer that redness may have
been present before death,
although we should find none
remaining when the corpse is
examined.
That when it has been owing
to mere fulness of blood vessels,
it may disappear with the death
of the individual, because the
same thing happens externally
in erysipelas & scarlet fever

The heat of inflammation,
must also be preternatural:
the temperature of the part ex-
ceeds that of health, but
not to such degree as the
laity would have one believe,
but the truth is, the heat is
not generally greater than the
temperature of the internal
organs.
The natural heat of the
body is about 98° F., but
in fevers & inflammatory
diseases it has been known
to exceed this several degrees,
and the maximum heat of
the blood in fevers and

maximum of heat of the blood in fever is probably the limit of the temperature as it exists in inflamed parts.

The surface of the body is not quite so hot as the internal parts, and the extremities are generally less warm than the trunk; so the contrast can be much easier discovered between the inflamed foot than the trunk.

It has been proved, that in no case does the inflamed part exceed that of the internal organs.

The increase of heat depends

upon the increase amount
of arterial blood, and therefore,
increased oxigen in the part.
Animal heat appears to be devis-
ed, in all cases, from the
mutual action that takes
place between oxygen & the el-
ements of the tissues; the tis
sues themselves undergo mean-
while perpetual changes, which
in the natural condition of
the body, belong and are
necessary to health. In a
part that is inflamed this
kind of combustion excess-
ive; while unnatural meta-
morphosis occur in the affected tissues.

swelling. This also depends, in some degree, upon the distention of the blood vessels; but no great amount of swelling can be attributed to this cause; and as much as does depend on it occurs early in the disease.

Some also, and almost the whole, of the swelling results from the escaping of the blood factors into the interstices of the affected part.

I mentioned, in describing the condition of the part inflamed, that the central portion of the swelling is softer, and yields

more readily when pressed with the point of the fingers, and sometimes even pits a little under that pressure.

The way this is brought about is this: at the place of the injury, the first change noticeable is increased circulation. The vessels are distended & tense, & therefore disposed to heighten the tension.

The congestion now described increases, until, at last, the capillaries loose their tension, dilate, the circulation at first so rapid now begins to grow slower & slower; then the

direction of its motion becomes uncertain; it oscillates, as it were, irregularly in those vessels until finally it stops altogether, and this, the point of stagnation is formed, and then comes the extravasation of corpuscles & serum that causes the swelling. Around this central point, the circulation remains still very rapid, and congestion persists.

At the same time the red corpuscles are very numerous & crowded. This, I say, is inflammation, of which the characteristic or pathognomonic feature is the formation of these points of stagnation.

The pain varies much in in inflammation, both as to degree & kind.
It is also differently felt by different persons, according to their natural susceptibilities. It varies from very slight uneasiness to the most harassing torture.
Sometimes it is of a dull aching character, as in tooth-ache; sometimes it is a prickling, tingling, or smarting sensation - as in some forms of skin disease - erysipelas for example.
Sometimes tis of a piercing

character, as if the part was stabbed with a knife— such is frequently the case in inflammation of a serous membrane, which is generally very different from inflammation of a mucous membrane: there, there is scarcely any pain at all. The stretching of the parts as a consequence of the swelling is, there, no doubt, partly the cause but not solely as some would have us believe.

I think it will be found that the most pain is felt in those parts which are least yielding— in which the tention produced

by the swelling, is the greatest
It is an unsettled question that
has often been mooted, whether in
inflammation, the state of the
blood-vessels is determined by the
nerves, or the senses.
Were nervous pains are sometimes
followed by congestion of the part
in which they are felt.
What ever may be the true state
of this question of priority, it is
certain that disordered conditions
of the bloodvessels, when produced,
greatly augments the sensibility
of the part. We may suppose
This depends partly on distention & partly
on the pressure made upon the nerves by the
swelling

Now that we have got inflammation in how many ways may it end? it may end in three ways, resolution, suppuration or mortification. Supposing the cause to have been removed, and the proper manner taken to subdue the inflammation, the pain will abate, the redness begin to grow more pale, and the swelling diminish, the heat will decline, until the part has at length regained its usual and natural appearance. This is Resolution.

But suppose the cause is not removed - or the original intensity

of the inflammation has been allowed to go too far to admit of resolution.

Then the symptoms all ready described continue, and are aggravated in degree; at last the swelling begins to assume a more pointed form, and the skin in the centre begins to look white; then the central part of the swelling, formaly so hard, begins to grow soften, and finally breaks or is lanced by the surgeon this, then, will be compelled to heal by ~~suppuration~~, granulation again if the injury has been

more serious, and the inflammation more intense, the part which it has invaded perishes by the violence of the disease: there is partial death. In that case the vivid red colour alters to a livid, or black, or greenish black hue. The function of the part exists no longer, the cellular is varied by a sanguinous fluid, the pain ceases, the part is devoid of all sensation — and exhales a peculiar and offensive odour.
The part, then, is in a state of gangrene or mortification.

Malaria — & Theis.

By

Wm. Cobb Whitfield.

of North Carolina.

Class 64.

Barn. Md.

"Abracadabra"

Macaria.

By

Wm. Cobb Whitfield;

Class 84. North Carolina

I shall attempt to discuss in my Thesis the Subject:
"Macaria".

And, I beg for my short comings, your kind indulgence: for the infirm Greek could not lift the shield of Achilles, nor can I, a mere novice, bear the armour of the famous sages who have so often essayed a similar task:— and as often failed.

Indeed no human eye hath seen, no Christ crucified hath yet found this mysterious and invisible influence. Like an evil spirit, invisible + unrecognizable, it goes from place to place, and we recognize it only by its effects on the animal system.

There is no shore that is free from it; no climate that will not foster it.

Though seemingly found for the most part in the torrid zone, its effects may be felt in the far North: you see them in the palace of the Arctic

the whale and the snowy couch
of the Aurora Borealis. A Cos-
mopolite — the whole world is
its home.

What is Malaria? Is it an
animal, a plant, a mineral
or a gas? If belonging to either
the animal or vegetable king-
dom upon what does it feed?
Malaria means "bad air."
This meaning gives us little
or no insight to its intrinsic
nature.

Numerous and learned in-
vestigations have entered the
field of research; but scarcely
any two have reached the same

conclusions. Prof Naemeyer wrote "I have no hesitation in saying that March Miasm must consist of low vegetable organisms whose developement is chiefly due to the putrefaction of vegetable substances. It is true these low organisms have not really been observed. No one has seen Malaria* spores."

Since the development of the germ theory some have claimed that it is a bacillus - bacillus Malariae - and that it is by this germ that its propagation is effected.

I believe no one has yet fully

demonstrated that Malaria really exists — its existence being rather inferred from the production of certain symptoms or phenomena that can not otherwise be accounted for.

It was formerly thought to exist and to emanate only from low marshy districts. The fallacy however of this belief has long since been established. It is, in fact, a cosmopolite — an inhabitant of the filthy morass — an inhabitant of the high lands with their beautiful scenery and lovely landscapes. Yes: even here we sometimes find Malaria. To say that it exists only in damp

places is a fallacy; To say that it is formed or formed only in damp places seems to be true.

Heat, moisture and vegetable decay, in combination, seem to be the usual factors in its production. It may be found in apparently dry & [illegible] sandy places. This is explained by the fact that we find beneath this apparently dry surface heat, moisture and vegetable decay producing mycelia.

After careful and repeated investigations in the Hong Kong, one the conclusion was reached that a large mass of decomposing granite from nine to ten feet

perfect health having prevailed prior to the quarrying of this material.

Fuchs showed this decaying rock to be filled with a kind of fungus; Dr. Parks, that this soil contained two per cent of organic matter.

Malaria is sometimes found in places where the usual factors in its production are wanting. This we can explain by the fact that strong currents of air blowing in the same direction for days or weeks carry the malaria into elevated and otherwise healthy places; or else it is deposited there by some rain or snow fall.

Malaria enters the system, it is supposed, by the bacilli Malariae which are taken up by the blood, and soon manifests itself on the entire organism.

Important blood changes — a decrease of the red corpuscles and an increase of the white — now take place, followed soon by still more important changes in the abdominal viceral — especially the Liver & Spleen.

Casorti thought "there would be very constant changes in the stomach".

The digestion is much impaired; the circulation sluggish; the

nervous system suffers, and soon we find our patient in a state of "general debility" a case of chronic malarial poisoning.

It is not infrequent to find malaria sustaining a causative relation to Neuralgia, diarrhoea, dysentery, ~~temporary~~ transient albuminuria; and we firmly believe also to abortion: But its important phenomena are observed in the malarial fevers:— Intermittent. Remittent and Pernicious.

Why it shows itself in such a variety of forms we will not essay to explain.

I have been surprised to

see that Dr. Casorti took malaria to be the prime "cause in an extremely small no. of intermittent fevers. He goes on to state that some intermittents of pregnant women are rheumatic, and that they often "cause abortion". They are, he adds, only curable by quinine. In partial refutation I may mention the fact that all of his observations were made in malarial districts.

We are led to conclude:-

1st There is such a thing as malaria, though we can only recognize it by its effects.

2nd Although we know under

what circumstances it is formed, we know nothing of its intrinsic nature.

3rd It is not restricted to the place where it is formed.

4th It may be carried considerable distances by water, wind and, may be, by rain and snow clouds.

5th The usual factors, in combination, of its production are heat, moisture and vegetable decomposing matter.

6th That it can be prevented.

The prognosis is usually favorable, except in the pernicious form where if not promptly treated it is very fatal.

I will mention a few peculiarities of malaria.

It does not seem to affect the negro to the same extent that it does the white man. In the South are those districts where the white man can scarcely live; yet, in the same place the full negro will live with almost absolute exemption from malarial troubles.

In fact it is stated that there are places in Liberia now inhabited by negroes where a white man can not live at all.

It has happened to me more than once to see white men during

from certain forms of malaria, when we poor wanted more in immediately and with certain exemptions from the Malarial poison.

It is absorbed by water and having been carried for a considerable distance is again at at liberty at some mill-dam or rapids over which the water, thus heavily charged with Malarial poison.

It seems also to be carried considerable distances in the clouds; either by being absorbed by the water or else borne along by the rain, wind, or snow-all

of which sometimes contain organic matter. Hence in this way we find Malaria in localities where the usual factors in its production are wanting.

It is most active at night and early morning.

This is proven by the fact that persons may labor, without the Malarial infection, if they do not remain there during the night - leaving before sunset, and returning after sunrise.

Another peculiarity, which we will only mention but not discuss, is that of periodicity.

How can we prevent it?

1st By Proper hygiene.

2nd By Medical treatment.

~~1st~~ 1st There is now going on an experiment with the Eucalyptus tree — a native of Australia — which seems to promise great results whenever the tree can be grown (Unfortunately it will not withstand severe winters).

The planting of the tree in malarial districts has given favorable results in different countries, and we hope the day is not far distant when many of our most fertile plains may be rescued.

In Italy portions of the fatal

Campagna have been reclaimed by planting the eucalyptus, and to day farms are cultivated in that ~~once~~ thoroughly Malarial district whose effluvia once no human soul could breathe and live.

The sun flower has gained some repute and 'tis now largely planted as a protection against Malaria.

In fact any kind of woodlands between the dwellings and the low marshy districts where the malaria is formed will act more or less as a protection. Hence the cutting down of such growth

will not infrequently cause a family, previously exempt, to suffer from malarial poison.

2nd Drainage is another great preventive, and, if well done, will drive from our most fertile plains that invisible and mysterious something we call Malaria.

There is now a large and extremely fertile district in N.C. that once ~~may~~ might have been, and very justly, too, called the Campagna of America. It was low, marshy and often covered with water; and from it emanated an effluvia under whose in-

fluence few persons who attempted to inhabit it failed shortly to succumb.

Attength some capitalists drained the entire district by cutting canals that emptied in to the Neuse river. Thus was rescued and rendered inhabitable a district scarcely less charged with malaria than the fatal Campagna of Rome.

This was done thirty years ago. The district is, thickly settled & its health statistics show the influence to be at a minimum.

There are many instances, but I mention this one because

it came under my own observation, and for whose authenticity I can safely vouch. Indeed, I have never known an instance in which diligence and faithful labor were given better results.

3rd Malaria sums by its specific gravity to seek the low places. Hence in selecting building sites we should choose those that are most elevated.

4th Tis best not to remain in a malarial district after night. Should we, however, be forced to do so we should sleep, preferably, in the top story, and close doors and windows toward

the Monarchy district

5th The party should not grant
audience himself in the
early morning, especially if
he has not breakfasted.

hiccough:- Only a word will be necessary.

Two chills followed by a distinct apyrexia can scarcely be confounded with anything else, unless it be hectic fever. In the latter case the history of the case with the attending circumstances will clear up the diagnosis.

Remittent fever & Bilious fever:- The former is essentially a fever of the country, while the latter is a disease of the sea coasts.

Remittent fever & Typhoid fever:- The former after a day or two of [illegible]

in by a distinct chill; more
or less hepatic and gastric
disturbance; yellowness of skin
& the distinct remissions.
In the latter we have, an in-
sidious approach — the patient
for days feeling that he is not
well, but still unable to say
where his trouble is — then more
or less diarrhoea: gradual rise
of temperature for three, four,
or five days; epistaxis; rose col-
ored spots; deafness & stupor;
suffused eyes; livid hue of
countenance; enteric changes.
In pernicious fever we have
the symptoms of remittent.

but they are greatly intensified — great prostration and after cause; history of the case shows patient to have lived in a malarial district

The treatment must vary accordingly as it is intermittent remittent, or pernicious, and can be "told in a nut shell":

1st Intermittent.

To abort or stop the chill in its incipiency, give a teaspoonful of chloroform in mucilage. To shorten the duration of the chill or apyrexia give half-teaspoonful of chloroform. To arrest permanently this

form of fever we have to re-
sort to the cinchona prepa-
rations, of which Sulph. quinine stands
at the head. Ten (10) to twenty (20) grs.
are usually required, and should
be given in the intermission.
Hepatic derangements should
be promptly corrected.
There being a strong tendency
to recurrence the treatment should
be kept up by giving small
doses every day or larger ones
every seventh day.
When the case has become
chronic tis best to add some
preparation of iron which
should be kept up for a long time

Iodine has undoubtedly a beneficial effect in the chronic form of malarious poison. I have known the following prescription to cure such cases after the long continued use of quinine had signally failed.

℞ Sulph. Quinine gr. 72
Iodine gr. 9
Opium gr. 7

M. Ft. pil. No. 48. Sig. One t.i.d.

Fowler's Solution of arsenic given in 6 or 10 drop doses t.i.d. has in some cases given good results.

There are a great many remedies now on trial which we will not enumerate.

2nd Treatment

It is generally best to administer some cathartic, thus preparing the system for the Specific that is to follow.

The Specific seems to act much more promptly and efficiently after such preparation. There may be cases where it is prudent not to wait for such preparation, but to administer the Specific promptly and in full doses, until the fever is "giving way". Then smaller doses suffice, which should be kept up for some time during the height of the Apyrexia

cooling drinks should be freely given. Spts. Mindererii will be of service during this stage.

Gastric distress should be treated with effervescing draughts, lime water &c.

3rd Pernicious fever.

Whether seen in the cold or hot stage it should be our duty to try to shorten such stage by external & internal stimulations: for the first, we resort to hot applications, as hot bottles, hot bags of salt or sand, &c, &c.; mustard plasters to spine & epigastrium or limbs; brandy & pepper. For second, we resort to

Chloroform, ether, opium, camph-
or, turpentine, brandy &c.

As soon as the patient is
ready for opium give it
promptly and in full doses
by mouth, rectum or hypo-
dermic syringe, preferably
the latter method, using hydro-
bromate of morphia.

This should be repeated in full
doses and at short intervals
until the patient is thoroughly
"cinchonized."

In severe cases give calo-
mel in purgative doses,
and apply cold to head; blis-
ters to nucha and sinapisms to

In the treatment of these medical troubles we have not omitted the minutiae for want of space; but have restricted our remarks to the leading points.

Croup and Diphtheria

The epidemic appearance of diphtheria at several points in the United States and England has revived a great deal of the old confusion in regard to its pathology; and has, as usual, led many to make the serious error of confounding this disease with pseudo-membranous croup.

As the safety of communities is seriously compromised by such a blunder, this subject is surely worthy of the attention of every true physician. While every one familiar with the history of diphtheria knows that it is an old and not a new disease, still it is a familiar fact, that diphtheria disappeared so

completely in this country for half a century, that when it reappeared, about thirty years ago, few physicians in America had ever seen it; few recognized it; few were able to diagnosticate it; and few American authorities contained anything more than a cursory allusion to it. Yet, during the whole period of the disappearance of diphtheria, pseudo-membranous croup was seen by almost every physician throughout the country. This does not indicate anything like an identity of the two diseases.

It has, indeed, become a serious and hotly discussed

question if the disease croup is to be retained as having any separate existence from diphtheria.

For more than six months in 1875, was battle waged in the columns of the Lancet, and ever since throughout the country upon this matter, and despite the high authority of those who urge their identity, I confess to remaining unconvinced.

Until recently Croup has generally been regarded as a local disease, an inflammation of the trachea attended with the formation of false membrane, "croupal exudation", though the practical

physician most commonly recog-
-nizes the disease by the spas-
-modic closure of the glottis,
the prolonged and crowing
inspiration, and the fear of
impending suffocation.

If to these symptoms are
added fever and inflammatory
excitement, he has no doubt
whatever that he is dealing
with a case of genuine, typical
croup, such as had been known
before diphtheria was recognized
and distinguished in this
country. To me, it
appears, that croup, whether it
be simple or membranous, is
a totally different disease from

diphtheria, and that they only approach any degree of relationship when the latter disease has invaded the larynx, and then the symptoms due to obstructed breathing are much the same in both cases. True croup is prone to attack the healthiest children, and in districts where diphtheria does not prevail. There are many instances on record of a whole family of children dying of diphtheria in the course of twenty or thirty days.

Malignant epidemics of this nature have prevailed in this country since 1857; but I can

find no record of three cases of genuine croup happening at one and the same time to a single family, and they have never lasted so long.

Diphtheria is a disease only recently described with precision; as soon as attention was directed to it physicians at once recognized a new disorder, both in its anatomical and clinical features, entirely different from anything they had previously seen, and presenting symptoms at complete variance with the so-called inflammatory or true croup. True croup is apt to come on very suddenly,

and in cases of recovery the general health is rapidly re-
-established, as compared with diphtheria. In diphtheria the disease is of a well-marked constitutional character, and is always accompanied by great depression and nervous symptoms.

Croup is a local disease; diphtheria is a constitutional affection, in which the kidneys and intestines may be involved.

Croup is neither infectious or contagious; diphtheria is both. Partial loss of voice, fetid breath, swollen neck and glands, with diminution of muscular power, & paralysis of the muscles of

deglutition and albuminuria are common in diphtheria; but they are not witnessed in inflammatory croup. Between croup and diphtheria there is also another very important diagnostic sign of difference; diphtheria generally begins in the pharynx, croup in the larynx.

It is difficult, in many cases, to draw any line of demarcation between the histological changes occurring in diphtheria and those of croup. In diphtheria, however, the sub-mucous tissue usually becomes more extensively involved, so that the false membrane is much less

readily removed. The
circulation also often becomes
so much interfered with that
portions of the tissue lose their
vitality, and large ash-colored
sloughs are formed, which, after
removal, leave a considerable loss
of substance. If croup
were identical with diphtheria,
it seems to me that the operation
of tracheotomy would rarely suc-
-ceed; whereas it is often very
successful when false membrane
has blocked up the tracheal
tube, and has been removed
from time to time after the
operation. The treatment
that would put an end to

a catarrhal croup would hourly aggravate a case of diphtheria and hasten death.

This, alone, ought to be sufficient to convince us that the two diseases are essentially different.

A child suffering from acute croup, is put to bed in an atmosphere of steam, and after the action of an emetic and perhaps a grain of calomel, the alarming symptoms gradually subside. This is never seen in a case of diphtheria; the nervous prostration which invariably accompanies it would be aggravated, and life probably sacrificed, by the

adoption of such treatment.

The croupal membrane, when disintegrating finds no lesion by which to produce septic blood poisoning; while septic diphtheria is recognized as one of its specific manifestations.

The mode of invasion and the time of the invasion of the two diseases are essentially different. The croupal and diphtheritic cough are dissimilar. When the symptomatic fever of croup disappears, the disease is virtually at an end. When the zymotic fever of diphtheria disappears, the disease is very often subsequent to this ——

notoriously fatal; indeed the danger is as great subsequent to the fever as before it.

While in both diseases death may be due to apnoea or asphyxia, or both, the diphtheritic patient often dies subsequent to such danger from asthenia, while such a result is confessedly rare, indeed, in croup.

Again, croup has no regular, while in diphtheria, the nervous system, by the gravest implication, evinces the existence of the blood poisoning, by paralysis of the voluntary and involuntary muscles; grave impairment of the nerves of

hearing; sight; olfaction; and gustation. These, so often seen in diphtheria are not seen in croup. Croup is confined almost exclusively to infancy and childhood, while diphtheria; wherever manifested at these periods, is commonly seen in patients of every age.

Not only is there no identity between these two diseases, but such a claim, appears to me very dangerous; it develops great danger to nurses, physicians and whole communities, where knowledge of a correct pathology reduces such danger to a minimum. So claim

an identity of croup and diphtheria, because of the similarity occasionally, of one of the results, viz., the membrane manifested is as irrational, in my opinion, as to claim an identity of typhoid fever and cirhosis of the liver, because of one of the results, intestinal hemorrhage, or an identity between diphtheria and chronic plastic bronchitis, because in these two diseases there is a similar membrane exfoliated. What anatomical character is there to distinguish gonorrhea from ordinary vaginitis, and yet the one arises from a definate and specific cause,

and the other arises idiopathically beyond doubt. And we have even greater distinctions in character, course, and sequelae, between croup and diphtheria than could be asserted to exist between gonorrhea and ordinary acute vaginitis in a chaste woman. The poison of gonorrhea produces inflammatory results as a certain consequence of contact; the causes of acute vaginitis produce them as an accident, which probably in a different state of the patient's system would not have occurred.

The poison of diphtheria,

and the idiopathic origin of croup, seem to me a similar example and I must say, that I consider the claims of their identity, as not only illogical and untenable, but dangerous in the extreme.

Respectfully submitted
By Geo. A. Fleming,
Baltimore,
Maryland.

The Anatomy of the Heart.

by

T. S. Kirkpatrick

The Heart.

is the hollow muscular organ found in the cavity of the chest lying between and almost surrounded by the two lungs, resting upon the centre of the upper (convex) thoracic surface of the diaphragm occupying the space known as the middle mediastinum. It is concealed within a closed cavity formed by the pericardium, lying for the greater portion of its extent unattached; but since its function is to maintain the circulation of the blood, the vessels, which bring this to it and carry it from it, all communicate with the upper portion (base) of the heart & this maintains its position; for the rest of its extent the heart pulsates

free in the pericardium, and to render its movements easy and noiseless a serous membrane is provided which, like all other serous membranes is a shut sac, one layer lining the inner surface of the pericardium and the other layer wrapped around the heart from the origin of the vessels on one side to their origin on the other. The heart is conical in shape, its base is above and to the right; its apex below and to the left; its length about five inches; its transverse measurement about 3½ in; its anteroposterior about 2½ in; its weight varies in both sexes, being rather larger in the male, from nine to twelve oz.

The exact position of the heart

is thus stated: the base lies behind the sternum corresponding to a line drawn between the upper borders of the extremities of the third costal cartilages, and the apex is downward and to the left striking the chest wall in pulsation at the interspace between the 5th and 6th ribs of the left side two inches below and one inch within the nipple: The cavity of the heart is separated into a right and a left half or apartment by an obliquely vertical septum, which cuts off all communication between the two halves. The position of the septum can be predicated by an inspection of the exterior of the heart, for here the line of its attach-

ment to the wall of the heart is indicated by an obliquely vertical groove passing from the base anteriorly and ~~towards~~ from its left aspect downwards to the right of the apex to rise along the posterior face of the heart and terminate at the base toward the right aspect. Lying in this groove, which is called the interventricular, is an artery. From the position of the groove it is seen that the apex of the heart is formed entirely of the left ~~ventricle~~ half, and that the front of the heart is formed mainly by the right half while the back of the heart is the product principally of the left half. When the heart is laid the whole cavity is seen to be lined

by a serous membrane (continued into the vessels which communicate with it, called the endocardium, and that each lateral half is is subdivided by a partial horizontal septum into two cavities the uppermost of these is called the auricle. the lower the ventricle, and to distinguish the cavities of the two sides, they are known as the right and left auricle & ventricle. The position of the horizontal sep is indicated externally by a groove passing around the heart horizontally and called auriculo-ventricular.

In the adult the venous blood of the entire body with the exception of that of the heart itself is returned into the right auricle by two

great veins called the venae cavae
the one bringing the blood from the head
and upper extremities is called the
superior; the one bringing the blood
from the lower extremities and body
is much larger and is called the in-
ferior; the venous blood from the head
is returned into the right auricle by a
separate vein called the coronary, and
just as this is about to enter the
auricle it dilates and this part is called
the coronary sinus.

Besides these channels for the
return of the venous blood, there
exist numerous minute apertures
for every cavity of the heart through
which it venous blood may enter
its cavity to a small extent and
these are known as foramina

Tubes ii. The venous blood thus collected by the right auricle is driven by it to dilatation into the right ventricle with which it communicates by an aperture, the right auriculoventricular, through the horizontal aperture from the right ventricle the blood is sent into the pulmonary artery, which soon divides into two branches, one to each lung. Taking up now the appearances seen in the cavities of the heart, we begin with the right auricle.

The Right Auricle consists of two portions, the larger portion, being called the sinus, but communicating with this & projecting forward is an earshaped addition called the appendix auriculae (this applies to both auricles)

The sinus in the right auricle presents the following objects, the opening of the superior vena cava at its upper back part at the lower back part the opening of the inf vena cava opens. The space between these two openings is called the tuberculum of Lower, from the fact that the wall is thicker here and presents sometimes a tubercular prominence. The coronary sinus presents an opening guarded by a valve-like fold of endocardium called the coronary valve, looking on the septum between the two auricles is seen an oval shaped depression called the fossa ovalis and surrounding this except below a ring called annulus ovalis, extending along the wall of the auricle from the

opening of the Inf vena cava to the
fossa ovalis is a ridge, the remains
of the Eustachian valve of the foetus:
the lining membrane of the cavity is
seen to be raised into ridges produced by
little muscular columns called mus=
culi pectinati, and lastly, of course, for=
amen Thebesii and the right
auricula ventricular opening.
To sum up, we have five openings
1- Superior vena cava, 2 Inf vena cava
3 Coronary sinus, 4 foramina Thebesii
and 5 auricula ventricular opening - and
Six other appearances - 1st musculi
pectinati 2nd Tubercle of Lower 3d coronary
valve 4th Eustachian valve - 5th fossa
ovalis - 6th Annulus ovalis -
ght ventricle - has two openings com=
municating with it; one leading

into the pulmonary artery and the other into the auricle; this opening is surrounded by a fibrous oval shaping ring and in order to prevent the bloods regurgitation into the auricle, when the ventricle contracts, this opening is provided with a valvular arrangement, which consists of three segments, each triangular and attached by its base to the fibrous ring and free at it's apex: they being formed of folds of endocardium, strengthened by fibrous tissue and perhaps muscular fibres. When the ventricle contracts the blood insinuates itself behind these segments (which, when the ventricle is passive, hang loose in it's cavity) and forces them before it, until they come together

their apices meeting in the center of the opening. Now these segments being quite flexible would be forced by the pressure of the blood into the cavity of the auricle, were it not that the following arrangement prevents it, only allowing the valves to float far enough up to close the opening: looking on the inner surface of the walls of the right ventricle is seen a number of ridges muscular columns which, when examined are seen to consist of three kinds. 1 Some form a mere ridge being attached to the wall of the ventricle by the whole of their length 2. Some are attached to the wall of the ventricle only by one end, the other end terminates in small tendons which

are attached to the ventricular aspect of the valvular segments and being only long enough to allow the segments to close - thus serve what prevent their floating into the auricle - the valve thus constituted is known as the tricuspid - The little tendons attached to its segments are called Chordae tendinae - and the muscular columns which produce them are called the columnae carneae. The blood driven by the contraction of the right ventricle being prevented from flowing into the auricle by the arrangement above described, is forced into the pulmonary artery - and, when the ventricle ceases its contraction, would again rush back into it, were it not for a valve

ular arrangement, found, called the semilunar valves which guard the orifice of the pulmonary artery. The semilunar valves are three segments arranged around the interior of the pulmonary artery just at its commencement, each segment is semilunar in shape, its convex border being superior and free, they consist of folds of lining membrane strengthened by fibrous tissue, which is aggregated into a projection just in the center of the free edge of each valve called corpus arantii, and just on either side of the corpus arantii, there is a lunated space, where the valve lacks fibrous tissue, except that just along the free edge of the valve

are a few fibres of fibrous tissue.
Now when the blood is being forced
into the artery, these are forced back
toward the walls of the artery, but
behind each valve is a depression
caused by dilatation of the coats of the
artery. and these are called the sinuses
of valsalva- when the ventricle ceases
to contract- The elastic recoil of
the artery would drive the blood
back into the ventricle ~~Did it~~ not
enter the sinuses of valsalva, and
thus forces the valves ~~forward~~ until
they meet along their free edges,
when the corpora arantii, dropping
together in the center completely
close the orifice, these and the attach
ments of the valves preventing them
from being driven too far down

To sum up then the objects found in the right ventricle, we have first: 1st The Columnae Carneae 2nd Chordae Tendineae 3d auriculo ventricular opening. 4th The opening into the pulmonary artery. 5th Tricuspid valves 6th Semilunar valves 7th Thin lining of course Foramina Thebesii.

I come now to the left side of the heart, and take first the left auricle, it wall is thicker than that of the right being about ⅛ of an inch, while that of the right is about ½ of an inch. It presents musculi pectinati but fewer than in the right (confines to appendix auricular) the opening into the left ventricle, left auriculo ventricular and the openings of the 4 pulmonary veins, which return

The blood carried by the Pulmonary
artery to the lungs - two coming
from each lung, the two from the left
lung sometimes uniting before emp
tying into the auricle. To sum up, we have
in the left auricle: 1st Four openings of the
Pulmonary veins - 2nd Left auriculo
ventricular opening 3d Musculi pectinati
Passing to the left ventricle we find
its wall three times as thick as
that of the right ventricle, being 7/12
of an inch thick, while that of the
right is only 2 1/2 12th. It is thus that
the left side of the heart is more
powerful than the right and this
is due to the fact that while the right
ventricle has only to propel the blood to
the lungs, the left has to distribute
it throughout the system. Its work

being estimated at 13 lbs to the pulsation.
On the walls of the left ventricle are seen Columnae Carneae much more prominent and intricately intersecting than in the right ventricle. Their arrangement into three sets is however the same.
1st Some are attached their whole length. 2nd Some attaches at one end and terminating at the other by Chordae tendineae 3d and others attached to both Ends.
The blood is forced from the left Auricle into the left ventricle and when this contracts it forces the blood into the Aorta.

Now then are valvular arrangements Guarding both these openings. The left auriculo ventricular and aortic.
The arrangement of the left auriculo ventricular is known as the Mitral or Bicuspid valve and is formed on the same principle as the tricuspid valve. It consists of two segments attached to a fibrous ring surrounding the opening by their larger extremity: their smaller being free in the cavity of the ventricle: It consists of folds of endo-

cardium strengthened by fibrous and muscular fibres and it receives the attachment of the chordae tendineae: so that it differs from the tricuspid valve in being stronger containing more fibrous tissue and in consisting of two segments.

The opening into the aorta is guarded by the aortic semilunar valves, which in every way are the counterpart of the valvular arrangement in the pulmonary

Artery, except in being larger and Stronger, they consist of three segments: folds of lining membrane with fibrous tissue, having the Corpora arantii, lunated Spaces and Sinuses of Valsalva, just as in the Pulmonary Semilunar and the Mechanism of their action is the same. The in the left ventricle there are 1st Columnae carneae 2nd Chordae Tendineae. 3d left auriculo ventricular opening 4th Aortic opening 5th Bicuspid valve.

6th Aortic Semilunar valves.

Peculiarities of the foetal heart.
The chief peculiarities are the direct communication between the two auricles through the foramen ovale, and the large size of the Eustachian valve. There are also several minor peculiarities. Thus the position of the heart is vertical until the fourth month, when it commences to assume an oblique direction. Its size is also very considerable as compared with the body, the proportion at the second month being as 1 to 50.

at birth it is as 1 to 120: whilst in the adult, the average is about 1 to 160. At an early period of foetal life the auricular portion of the heart is larger than the ventricular, the right auricle being more capacious than the left: but towards birth, the ventricular portion becomes the larger.

The thickness of both ventricles is at first about equal; but, towards birth, the left becomes much thicker than the right of the two.

The foramen ovale is situated at the lower and back part of the septum auriculorum forming a communication between the auricles. It attains its greatest size at the sixth month. The Eustachian valve is developed from the anterior border of the inferior vena cava at its entrance into the auricle. It is directed upwards on the left side of the opening of this vein, and serves to direct

the blood from the inferior
vena cava through the foramen
ovale into the left auricle.

Fini.

Very respectfully
T. S. Kirkpatrick

Thesis

J. L. McCormick

Case 1st

John Jones (colored) aged 4 yrs No 9 Claret Alley whose parents are both alive and well and Father & mother of both parents alive and apparently strong and healthy, none of the relatives ever had any lung trouble. The mother of the boy has five other children alive and all hearty, but all of whom John included had Small-pox at the same time (viz) about latter part of January 83 one of which lost an eye -, The Mother of the boy, has lost 3 children - first one died Dropsy following Diptheria aged 3 yrs, Second died of Bronchitis aged 2 yrs third died of Whooping cough aged 5 yrs

Mother is 29 yrs old Father 32
the Mother was 18 yrs old when
married and has had no miscarriages
John Jones was as strong and orgorous
child until latter part of January 83
when he was taken with Small-pox
from which he recovered after two
weeks illness and apparently for
three weeks after was in better health
than ever before - Then he commenced
with a slight hacking cough, spitting
up with the first attack and every
day or so thereafter, about a teaspoonful
of red frothy looking blood and has
been gradually losing flesh and
strength since - Following prescription
ordered by Prof Wm H. Howard May 3-83

℞ Quinia Sulphas ℈i
Tinct Digitalis gtts LX
Syrup Simplicis ℥iij ℘ misce
Sig - ℥i t.d.

May 3rd 83 6.30 P.M. - Pulse 160 Resp 70
Temp 102 - May 4 - 10.25 A.M. Pulse 156 -
Resp 66 - Temp 101 - May 5th - 4.15 P.M. Pulse 159
Resp 78 Temp 101 - May 6 11.25 A.M. Pulse 140 Resp 49
Temp 100.3 May 7th 7.10 P.M. Pulse 135 - Resp 68
Temp 102.4 May 8 10.30 A.M. Pulse 150, Resp 68
Temp 100.1 - May 9 6.05 P.M. Pulse 154 - Resp 64.
Temp 101.4 -

May 19th Physical Signs

Percussion - Dullness on entire right side and flat under Clavicle - Left side fair amount of resonance at Clavicle, but dull at base, below scapula and behind

Vocal Fremitus

Increased all over back Lungs
much more in right than left Lung
particularly at Apex & base

Vocal Resonance

Increased in same proportion

Auscultation

In front at apices roughened respiration on both sides, at back apices
rough also and at base of both Lungs
moist subcrepitant Bronchial rales
and blowing Cavernous Respiration
on right side in Subscapular
region below spine of Scapula
Pulse 132- Respiration, 60 Temp 98 2/5
February 15-84- Physical Signs
Percussion Dulness throughout

both lungs -
No vocal fremitus whatever
Resonance - increased at apex
of right lung markedly
Auscultation - Prolonged expiratory
murmur - Short Cogwheel inspiratory
murmur & Puerile respiration
no rales whatever
Pulse ~~140~~ 155 Resp 40 Temp 100

Case 2nd

Gunshot Wound

R. C. aged 19- Brought to the Hospital May 3rd 83- 9 30 A.M. On Friday two days before. was accidentally shot ball passing through the right hand entering about the metacarpal articulation of the little finger, coming out near the base of the metacarpus of the thumb on the palmar surface from thence passing into the throat about an inch above the sternal notch, and a half inch to the left of the median line, when brought to the Hospital the radial pulse on the left side was barely perceptible left fingers could not be closed, left

arm had all its movements, back was colder than the right, right radial pulse strong & full, bounding 112 to the minute, patient suffering no pain, spit a little blood Saturday dark in color.

Inspection

Pulsation about the neck on both sides, no swelling.

Placing fingers on left side of neck a sensation exactly resembling Emphysema was felt, this sensation continued with pulsation while the fingers were pressing on the part, and extended over an area; from the outer end of the clavicle along its upper border for two and

one half inches. also extending up
the side of the neck for three inches
more felt to the right of the bullet
hole. On applying Stethoscope a
sawing sound synchronous with
the hearts beat, heard on both sides
of neck, but with greatest intensity
3 inches to the left on a horizontal
line with the bullet wound.
heard six inches from Sternal
notch in the Median line
Four inches down and three inches
to the left of sternal notch, same
on right side, sound heard along
Brachial artery to within four inches
of the Elbow joint
Percussion gave no abnormal sound

Treatment

Bullet hole dusted with Iodoform and, Oakum and bandage applied low diet,- Opium pro re nata

May 4th Morning temp 100 3/5 Pulse 100 Respiration 20, Evening 100 2/5 Pulse 108 Resption 20 -

May 5	M.	Temp	101 2	P-120	R 18	Evng	T-102 1	P-108	R 22
" 6	M.	"	100 2	P-110	R-22	"	T-99 1	P-114	R-22
" 7	M.	"	99 3	P-98	R-18	"	T-99	P-102	R-20
" 8	M	"	100	P-100	R-18	"	T-99	P-106	R 17
" 9	M	"	98 4	P-90	R-18	"	T-100	P-100	R-14

Patient has spit no blood since the day after shooting,

May 18th - Temp & Pulse normal

Auscultation still gives rasping,

around but less distinct and over
small area, Although pulse normal, left pulse still weak
May 26th Patient carried home

Case 3

Oliver Collins (Colored) aged 34

Strangulated Hernia

January 4th — Fifteen years ago a wagon wheel passed over his belly shortly afterwards he noticed a swelling in his left groin which was diagnosed as a Rupture — Up to within the last week has been wearing a Truss, which at that time for some reason was discarded on Friday last, pain began and swelling, three or four hours after pain began he had a passage from the Bowels, by night pain was very severe and vomiting had set in, on Saturday morning January 5th

he saw two Physicians, who
administered an Anesthetic and
attempted reduction, without success
~~Also~~ Monday January 17th brought to
the Hospital, Pulse good, swelling
tense, some fluctuation at lower
part of Tumor, said Tumor being
3½ by 4½ inches, Patient placed
under Chloroform, reduction attempted
by manipulation, unsuccessful
Operation being decided upon, an
incision 4 inches long, made and
the sac opened, From one and
a half to two ounces of dark foul
smelling fluid discharged, Gut
exposed also a piece of Omentum
about size of two middle fingers

Gut dark mahogony colored, no gangrenous odor, Omentum cut off - constriction cut & gut returned to belly cavity, large drainage tube inserted and wound sutured with Silver wire, Throughout the operation sponges were washed in a solution of Bichloride of Mercury 1 to 2000 - Wound cleansed with same, Pad of Oakum saturated with solution and placed over wound, over this dry oakum & bandage,

January 8 - M. 99¹ - P. 114. R. 24 E. 99² - P. 108 - Resp 25

" 9 - " 99² P. - 120 - R. 24 - E. 102 - P. 128 Resp - 18

" 11 - Dressing removed and wound well cleansed with Bichloride

Solution - Temp. M. 101^{1} - P. 124 - R. 16 - E. T. 101^{3} - P. 116 - R - 20

Patient had to day a copious action from bowels not due to any purgative

Jany 14th Contents of Intestine discharged through wound, also had a passage from rectum - tube removed, wound dressed twice daily, Temp 100 -

Jany 18 - Discharge from wound less Temp 99 & 100 -

Jany 22 - Temp & Pulse Normal wound almost entirely healed Passages from Rectum daily -

Jany 31 Patient left Hospital No discharge from wound passages from Rectum daily

Case 4

Scalp Wound

J. C. Came into the Hospital July 27th 83 at 10 A.M. Suffering from a wound of the scalp, about 2½ inches long, extending transversely across from the apex of the occipital bone. An examination revealed no fracture, but periosteum removed for about the space of ½ an inch, Pupils normal tongue protruded in median line, and no paralysis, but patient very much nauseated, Temp 99 Pulse 54 Respiration 18, Wound stitched up and dusted with Iodoforme and Oakum × bandage applied -

Evening - Patient still suffering

from nausea and appears stupid
Temp 99[2] Pulse 68 - Resp 24
Morning of 28th Patient complains of pain
about front of head, is still nauseated
and very restless temp 98[4] pulse 62 Resp 18
Night patient has been asleep all the
afternoon and is not suffering from
nausea. Morning of 29th Patient is
again restless and suffering from
nausea; Calomel powders 1/6 of gr
each ordered, dry on tongue, every
hour until relieved. Temp 98[2] Pulse 66
Resp 18. Evening - patient not
nauseated but complaining of pain
from wound. Temp 98[2] Pulse 68
Resp 18 Morning of 30th Patient passed
a good night and is quiet + comfortable

Temp 98 Pulse 60 - Resp 18, Evening
temp 99 - Pulse 64 - Resp 18 - Bowels
constipated 10 grs Calomel ordered.
Morning of 21st patient comfortable
temp 98 Pulse 72 - Resp 18 - Evening
patient weak Calomel having operated
very freely Temp 100, Pulse 78 - Resp 18
Aug 1st patient is feeling much better
enjoyed his breakfast and is sitting
up on Hospital porch - Temp 98 2/
Pulse 64 - Resp 18 -

Case 5

Henrietta Murphy (Colored) Aged 20

Tumor

Came into the Hospital for operation has had for two years past, a Tumor situated just below the angle of the lower jaw on the right side, about the size of a large Orange and hard and lobulated no pain,

May 14th Chloroform administered

Linear incision about four and a half inches in lenghth across surface of the Tumor, which was peeled from capsule by fingers, it was under the Platysma muscle - No adhesions to the jaw was apparently an Osteo Enchondroma

Surface of wound dusted liberally

with Iodoform, Drainage tube inserted. Seven wire sutures, brought edges of incision together, hemmorrhage slight and arrested by torsion & pressure, oakum & bandage applied

May 15 M. Temp - 99⁴ - P - 104 - R - 16 Evng Temp 102 - P 116 - Resp 16
" 16 " " - 101² - P 104 - R - 14 " " 101⁴ P 112 - Resp 24

Wound dressed, discharge small considerable swelling,

May 17 Temp 100¹ - P - 114 - R 28 - Evng Temp 101 - P - 112 - Resp - 24

" 19 Sutures removed, greater part of incision healed by first intention, drainage tube removed, discharge moderate -

May 22 - Patient doing well Temperature between 99 & 100 -

May 26 - Patient left Hospital, some swelling at point where Tumor was

removed, incision healed —

John C. K. White

of

Virginia.

Inflammation.

Definition of Inflammation.

"Inflammation may be defined to be the assemblage of changes which take place in the living tissues as the result of some kind of injury, provided that the injury be sufficient to destroy its vitality," and accompanied with heat, pain, redness, swelling & loss of function.

The causes of Inflammation are Predisposing & Exciting.

The Predisposing causes are Syphilis, Scrofula, Imminera-

diseases and infact anything that lowers the vitality of the system. The exciting causes are mechanical and chemical. The mechanical causes, are such as are occasioned by surgical operations and the chemical causes are cold, heat poisons, & certain conditions of the vascular system, which produce boils, carbuncles etc. In order for us to understand the phenomena of Inflammation, we will consider the pathology. Pathology of Inflammation. If we produce Inflammation

artificially in transparent tissue we will notice these changes. First changes in the bloodvessels and circulation. Secondly, exudation of the liquor sanguinis and migration of the blood corpuscles, and the third phenomenon, alterations in the nutrition of the inflamed tissue. It will be well for us to consider these processes separately in order that we may understand them better. The first we will consider is:

Changes in the bloodvessels and circulation. The changes

in the blood vessels & circu-
-lation are essential constituents
of inflammation, both in
the vascular and non vascular
tissues. In the latter which
comprise the cornea & cartilages,
they take place in the ad-
jacent vessels from which
these tissues derive their nu-
-trition entirely. After produc-
ing artificial inflammation
they experiment thus:
the first phenomenon observed
above, is dilatation of the
arteries and after some time
a similar dilatation in the
veins and capillaries. The

dilatation of the arteries commences at once. It may be preceded by a contraction, but some writers say this is not so, and if so, accidental. The dilatation gradually increases for some hrs. and is accompanied by an increase in length of the vessels, which become tortuous. The dilatation of the bloodvessels is associated at the commencement with an acceleration in the flow of blood, this accelerated flow of blood lasts about an hour. It is followed by a slowing of

the blood, or dilatation.
The vessels remaining dila-
-ted. As the flow of blood
becomes slower & slower, there
will be noticed little whit-
cells accumulating along
the sides of the walls of
the vessels in great numbers,
known as white corpuscles, or
leucocytes, the red corpuscles
also accumulate, but are
confined to the centre.
As this process goes on you
will notice the blood be-
come to . . almost standstill.
This is known as the Inflam-
matory stasis. In the progress of

In inflammation there will be
produced a discoloration which
means that the white corpuscles
have commenced to wander,
or migrate. It will be well
to state the theory by the
words dilate: It is supposed by
some, & I believe that it is
generally taken, that it is some
alteration in the vessel walls.
Migration of the white-cor-
-puscles. The white corpuscles
having accumulated in large
numbers in the vessels, begin
to migrate, still clinging
along the sides of the vessels
they will gradually sink

-down into the walls of the veins & pass through into the surrounding tissue. At first you will notice little projections; looking something like a button, getting larger & larger, until the whole corpuscle has escaped, except a small portion & finally it gives away, & the whole corpuscle has liberated itself to wander in the surrounding tissue. This same migration will take place in the capillaries, until a large number have escaped. The red corpuscles also escape

through the capillaries, but not in as great a number. The diapedesis only takes place in the veins & capillaries & not in the arteries. If there is complete stasis, no migration will take place on account of coagulation of the blood. While the migration of the corpuscles has gone on for some time there will be noticed an other phenomena. The extravasation of the liquor sanguinis. This extravasation of the blood is rich in albumen & fibrinoplastic etc. & mixed with the white

corpuscles has a great tendency to coagulate & forms the Inflammatory effusion. Alterations in the nutrition of the inflamed tissue. We will next consider. Whatever it is that injures a tissue so as to interfere with its proper function, will impair its nutrition. It will depend upon the severity of the cause as to how much the nutrition is impaired. The greater the cause the severer the inflammation. One of the principle causes of altered nutrition ..

is the coagulation of blood & exudation in the surrounding tissue. If the coagulation & exudation continue until it has completely cut off the nutrition supply it may cause its death or necrosis, but if the circulation & exudation is not influenced too much, the cells may undergo fatty degeneration & be absorbed. The functional is its normal condition or new growth may be formed.

Termination of Inflammation

The most favorable termination of inflammation is Resolution

If the vessels walls are not affected too much and the Lymphatics can perform their duty, the cause removed & the inflammation in a healthy subject, Resolution is apt to take place. but if injury is of such severity as to continue to destroy the vitality of the tissues & vessels, death will take place or Necrosis, Inflammation may be of such intensity, as not to produce either of the above results; but throw out an effusion. (Plastic Lymph) & in this blood vessels shoot out

into it & new formation takes place, hence another termination of Inflammation. (New Growth)

Symptoms of Inflammation. Local & General. The local symptoms of Inflammation are heat, redness, swelling, pain, & loss of function. The heat is due to the increased tissue metamorphosis, brought about by the inflammatory process. Redness of inflammation is due to the dilatation of the vessels & the accumulation of red blood corpuscles. The color is of a bright crimson & a bluish tint & depending upon

the constitution & congestion.
The swelling of inflammation
is due to an afflux of blood,
the migration of the red &
white corpuscles, & exudation
of the liquor sanguinis. It is
greater in loose texture than
in hard, such as bone. — Pain. —
This depends upon the seat
of inflammation, being greater
in dense tissue, than in tissue
that will yield to the pressure
It is due to increase sensibility
of the nerves, by pressure
on the terminal branches,
produced by the dilatation
of the vessels walls & exuded

matter. The next local symptom is loss of function, which is due to the inflammation & is known by the part that is affected, for instance if the eye is inflamed it cannot receive light; or if the bladder is likewise affected it cannot retain the urine.

General Symptoms. — The Constitutional manifestation of inflammation is fever. There general types. Sthenic, Asthenic, & Intermittent. The Sthenic form of fever occurs in persons who have good constitution, but if they have

persons down their constitution by dissipation of any kind, they are likely to take an the asthenic fever. In persons whose nervous system is at fault; we are apt to have the irritative fever, but we can have both the irritative and asthenic fevers, occuring in persons who have not only their mental powers overwrought, but their nervous system deranged, by misimprovement etc.

Diagnosis of Inflammation

The diagnosis of Inflammation is made by the symptoms. If a part be inflamed & superficial

we can make our diagnosis by, inspection, feeling, fluctuation & pain on pressure, but if the inflammation be deep we make our diagnosis by the local & general symptoms such as fever, loss of function & pain on pressure.

Prognosis of Inflammation

The prognosis of inflammation depends upon its seat, cause & intensity. There is simple inflammation in an epidermis of a healthy person, it is in general a matter of little gravity, whereas a deep seated inflammation of

apart, or a circumscribed inflammation of a vital organ, would necessarily be followed by grave & possibly fatal results.

Treatment of Inflammation.

The treatment of inflammation is Local & General.

The local treatment of Inflammation, Is first remove the cause & put the part at rest; secondly position. Elevate the part so as to favor the return of blood & prevent it from flowing to the part too fast. Cold applications in the first stage to prevent exudation

Bandaging, to be used in the stages when exudation has not taken place & Resolution not possible, warm applications should be used to favor suppuration. After suppuration has taken place you must keep the part clean & use antiseptics.

General treat of inflammation. This depends upon the type fever. Which follows inflammation but if the inflammation takes on the adynamic form of fever. Low diet & depletion may be necessary. But if it is asthenic. Stimulants & supporting treatment is indicated. Proper attention

should be paid to the condition of the emunctories & care should be taken that good hygiene be secured & proper food administered.

Very Respectfully,
John K. White

Thesis, Session 83 4

L. G. Mitchell

Indigestion

The occurrence of this affection is so frequent and attended with so distressing a train of Symptoms, that it has the strongest claim upon the attention and Sympathy of the Physicians. The habitual dyspeptic is indeed truly miserable, His sullen and anxious countenance his aversion to Social enjoyments and the occasional over whelming despondency of his mind, shew him to be the prey of deep and harrassing suffering of which none but those who have experienced them can form any adequate idea. Common however

and serious are
are its consequences upon the health
and happiness of man, there is
perhaps hardly any other malady
which man is heir to that is
so commonly misunderstood,
and consequently so commonly
mismanaged. I may state in the
outset of this Thesis that in
order to obtain a correct view
of the pathology of Indigestion
and of the true indications of
its remediate management, it is
necessary to be acquainted with
the physiology of the process of
digestion. I can only in this short
paper refer to the prominent &
essential phenomena of this process.

It appears to me that the two following conditions are essential to the regular and healthy performance of the function of digestion, 1st A proper cooking and a thorough mastication of food, & the bile and peristaltic action of the muscular Coats of the stomach in order that the food may be uniformly acted upon by the parietes of this organ, and as it successively undergoes chymification where it is in contact with the stomach & pushed forwards towards the pylorus into the duodenum. 2nd The regular secretion of a sufficient quantity of gastric juice.

that the gastric juice is really the solvent which converts the aliments into that pullaceous mass called chyme, and that therefore digestion so far as chymification is concerned is chiefly effected by the agency of this fluid is I think established beyond all dispute. According to experiments chymification seems to go on perfectly well in animals after the biliary duct has been tied; The principle agency of bile in digestion is to render the chyme alkaline & to render the surface more absorbent, the pancreatic juice then comes in to do what the other

have not been. It has been stated that the immediate cause of Indigestion consists in a vitiated condition of the gastric juice and deficient or irregular action of the muscular coats of the stomach, Now as both muscular action and secretion are under the immediate influence of the nervous power, it is plain that whatever causes an irritation or morbid excitement in the nervous structure of this organ, must necessarily tend to derange the healthy performance of these two functions. Accordingly every thing which is capable of cause

ing indigestion must be done either by interrupting the regular supply of nervous influence to the stomach or by irritating the nervous extremities of the mucous membrane of this organ; or by producing both these effects simultaneously. Of the former commonly those that interfere with the regular transmission of nervous influence to the stomach are the mental. It is surprising how suddenly any temporary mental agitation depresses, may often wholly suspends for a time the keenest appetite and power of digestion. These temporary depressions of appetite and powers of digestion

from sudden emotions of the mind may be converted into protracted and unmanageable cases of dyspepsia, while the mental perturbations are of a chronic and depressing character. Protracted grief and despondency seldom fail to weaken the digestive powers and to bring on indirectly confirmed and unyielding indigestion.

Protracted and intense application of the mind when attended with a sedentary mode of life is another of those causes which act through the medium of the general system. Such indeed are the sympathetic

relation of the Stomach with the whole and every part of the human organism that its functions become disturbed by whatever causes either general debility or organic disorder of the principle organs of the body. But it is now conceded that by far the most common and powerful causes of indigestion are those that act directly upon the nervous extremities of the mucous membrane of the Stomach.

Whatever is calculated to cause permanent irritation of this membrane has a direct tendency to produce this disease

It has been assumed as a physiological axiom that the function of secretion can never be deranged without irritation existing in the secreting organ.
Irritation of the vascular extremities that secrete the gastric fluid exist therefore in every case of indigestion.
The causes which most frequently give rise to this irritation are overdistension of the stomach and indigestible and irritating articles of food, the manner in which food of this kind produces the irritation in question, may be readily understood, when food

resist the digestive powers for
long besides direct irritating
impressions upon the stomach
it excites, more or less into the
fermentative process and
evolves acidity and gas which
increases the irritating qualities
of the contents of the stomach.
Besides, these consequences of
too long retention of imperfectly
digested food in the stomach
the muscular powers of this or-
gan will be diminished by the
long and continued exercise to
which it is subjected, as well
as by the overdistension and
irritation caused by the gases.
In consequence of this indiges-

tion portion of half digested food will pass into the duodenum which being altogether uncongenial to the sensibility of this organ will give rise in it to irritation, spasm, and pain, and through sympathy to functional derangement of the Liver. When this state of things is produced by some error in diet or whatever cause may be assisted perhaps by general causes, even the digestible ordinarily and plain diet taken in health will not only sustain it but increase its violence if favored by other circumstances of a debilitating character.

Same authors think eating too much is one of the most common cause of dyspepsia, and there can be no doubt as to its decided tendency in this way. It is probable however that it is not so much by an over distension of the muscular coats of the Stomach, which a super abundant ingesta produces, that indigestion is caused as by the mere excess of food beyond what the Stomach is capable of digesting. Suppose the utmost powers of the Stomach be capable of digesting 16 ounces of food at a time, it is manifest if 20

[illegible] be taken in some of it will remain in a partially digested state in the stomach a longer time than is compatible with the healthy condition of that organ, this portion will therefore irritate the gastric nerves enter more or less into a state of decomposition and give rise to deficient or vitiated secretion in the stomach as well as debility of its muscular tunic. The effects which follow an undue reception of food into the stomach, besides those of mere over distension do not differ from those that are caused by indigestible articles,

of diet. A small portion of food which resist the digestive power is capable of bringing on indigestion dyspepsia, by remaining in the stomach beyond the period which is allotted by nature to the process of digestion and becoming there by a source of irritation in the manner already mentioned. Just so does it happen when the portion of food however digestible is greater than the stomach is capable of digesting at a time for the portion which remains in an undigested state and which the stomach is no longer capable of converting into chyme, will

act like so much undigested food and give rise to the distressing consequences which often result from such articles of diet. The causes which most commonly accasion the reception of more aliment into the stomach than its powers are capable of converting into Chyme are, 1st Eating too fast, The appetite subsides only in proportion as the gastric juice becomes mixed and as it were neutralized by the food. When we eat rapidly time is not given to the gastric juice to combine with that part of the food which is presented to it; the

sensation of hunger therefore continues, and we continue to eat, until more food than the greatest quantity of gastric juice the stomach is capable of secreting can digest and imperfect chymification is the result. Where as when we eat slowly so that a proper time is given for the combination to take place the appetite abates before the stomach is over charged. Every one has occasionly observed that if his meal is interrupted for ten or fifteen minutes after having eaten perhaps not one third of the usual meal he

drinks particularly during meals tends much to weaken the digestion and to aid other causes in the production of dyspepsia. By drinking freely the gastric juice is so much diluted that its powers are weakened and of course the process of digestion more or less retarded. We have stated above that an insufficient peristaltic action of the muscular coats of the stomach by which the digested portions of food are too long retained in this organ is very often the cause of dyspeptic symptoms. We are persuaded that the revers

conditions also very frequently obtains in cases of painful and imperfect digestion, namely that the food is too rapidly hurried through the stomach into the duodenum before it has had time to undergo the full action of the gastric juice. This appears most commonly in such cases as are attended with a high degree of irritation, or a subinflammatory condition of the mucous membrane of the primae viae.

That a morbid peristaltic activity of the stomach often exists in dyspepsia may be inferred from the cause-

pancos- which are known to result from high irritation of the mucous membrane of the intestinal tract. The phenomena of indigestion in aggravated cases also confirms the correctness of this opinion.

Authors tell us it is a common circumstance for instance to hear dyspeptics complain of a sense of fullness in the stomach after eating a small quanity of food. But notwithstanding this feeling of repletion they soon complain again of the customary sense of emptiness in the region of the stomach and crave

for more food. In such cases it is to be observed that the chief distress or uneasiness is not experienced in the stomach but rather in the region of the duodenum. In some cases the food is speedily hurried off by the bowels in an imperfectly digested condition, under very severe suffering from tormina and flatulent distension of the bowels. In a practical point of view, it is of great importance then to bear in mind that dyspepsia may depend on the distinct morbid condition of the digestive organs; namely 1st an functional

debility of the stomach from deficient or vitiated secretion of the gastric juice and muscular inactivity independent of vascular irritation or inflammation.
2ly A deficient or vitiated secretion of gastric fluid with vascular irritation or chronic inflammation of the mucous membrane of the stomach and duodenum and a morbidly increased peristaltic actions of the organs.
The characteristic Symptoms of the former mode of indigestion are poor appetite absence of Epigastric tenderness excepting flatulent distension, Coated

tongue costiness: acid eructa-
tions: absence of febrile irritation
and the ability of bearing lean
and tender animal food better
than vegetables and farana
ceous articles of diet. The
phenomena which charac-
terizes the Second or inflam
matory grade of the disease
are tenderness on pressure
over Epigastric region: A red
chapped glassy appearance of
the tongue: Small and accel-
erated pulse: And febrile exac
erbations towards evening.
emaciation: irregular action
of the bowels, with frequent
attacks of Diarrhea: protracted

pain during the process of dige-
tion; anxious expression of com-
tenance and inability to bear
animal food and Stimulants.
It appears that the irritation or
inflammation of such cases
is seated in the mucous mem-
brane of the pyloric extremity
of the stomach and the duode-
num connected with a con-
gested state of the liver, the
left lobe being most com-
monly effected in such cases.
In the treatment of this disease
as in most others, the first
and by far the most im-
portent indication is the
removal of the cause. The

numerous requisite for the due
embrace the regulation of
diet, the exercise of decis-
ion with regard to the pa-
tients general habits both moral
physical. The most obvious
rule in relation to diet is to
avoid the use of all substan-
ces of difficult digestion.
Specifications in the treatment
of this disease are true only
in general, for the peculiar-
ities of individuals stomachs
are so numerous that an
article easily digested by one
will prove almost indigestible
to another and Vice Versa. In
all cases of dyspepsia an

underlying observance of suitable regulations in regard both to the quanity and quality of the aliment and the manner of taking it is absolutely indispensable to success. The patient should be directed to masticate well and slowly; to take his meals at regular hours; to eat no more at a time than is just to sustain the power of the system; to drink but a little while taking & for a short time after meals, and avoid taking any active exercise or mind work during the first stages of the process of digestion.

In regard to drugs they are only secondary to Hygiene in such cases.

Respectfully presented by,

L. G. Mitchell

[illegible]

[illegible]

[illegible]

[illegible] by a tendency to the formation of [illegible]

It is a disease of antiquity dating as far back as the commencement of the Christian era.

Aretaeus near the close of the first century after Christ described a disease under the name of Malum Egyptiacum which is now considered to be identical with diphtheria.

Since the commencement of the 16th century numerous epidemics of it have occurred both in this country & in Europe, and at present it is one of the most

attack does not protect the system against a recurrence. In its [illegible] it resembles. In third form, or it is not communicable from person to person. The discharges not also it is [illegible] but while there are certain resemblances it has certain peculiarities which distinguish it from all these infectious diseases and render the diagnosis a matter of considerable ease and accuracy.

[illegible] there are [illegible] peculiarities which [illegible] [illegible] [illegible]

not a few of the scarlatinous subjects are affected with diphtheria in the latter part of the first or early part of the second week though it very rarely happens that a patient with diphtheria is affected with scarlatina.

The microscope in the hands of various scientists (Oertel, Kühl, Huette and others) has revealed that in all tissues that are the seat of diphtheria inflammation and in every diphtheritic pseudo-membrane the presence of sphero-bacteria in immense numbers accompanied by a smaller number of microbacteria and the severity of the disease seemed to be in direct proportion to the number

of these minute organisms.
Oertel says, "I have that of the various kinds of bacteria as spirillum, bacillus bacteria lineola, as well as the sphero bacterium were present in the matter inoculated that only the sphero bacteria or micrococci increased very extensively the others the others finally disappearing altogether"
Nasseloff and Eberth having inoculated the corneat with diphtheritic matter found that the sphero bacteria and also the micro bacteria penetrated its layers and in a few days caused a violent keratitis and finally death of the animal from infection of the blood.
And finally Erfurth failed to produce the above result by using diphtheritic

matter from which all the bacteria had been removed as carefully as possible. The reason assigned why the inoculation attacks the faucial and nasal passages is that the atmosphere which contains the organisms here comes in direct contact with the surface. In concluding the above bacterian theory there is one fact that must come into the mind of every practitioner of medicine, which is, that diphtheria must in its incipiency be a strictly local disease, and hence requires energetic local treatment and with the efficient bactericides now at our service the mortality from this much dreaded disease should be considerably diminished.

But the bacterian theory of the origin of diphtheria like every many other subjects in medicine has its opponents as well as its advocates prominent among the former class stands Dr. Lewis Smith who says; he, in conjunction with another skilled microscopist repeatedly examined the exudation with diphtheritic and non-diphtheritic inflammation and found the same spheres and micro bacteria in both. It is also known that bacteria which seem to be identical with these two varieties are found on the gums and between the teeth even when the person is in the most perfect state of health.

Another fact that the advocates of the

bacterian Theory have as yet failed to explain and to thinking minds must have great influence against it, is why the bacteria do not irritate the lungs which from the delicacy of their structure we would suppose to be especially prone to their action and to become inflammed. another most potent argument against the above mentioned theory is that it is not upheld by clinical experience which we know all experimentation is the true fountain from which our Medical knowledge must be drawn does Septicaemia either surgical or as it occurs in other diseases have the same sequelae, or is it liable to the same complications, as a rule, as Phthisis?

Again is it at all probable that such
factors would remain a mere matter
of [illegible] [illegible]
[illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [

Pointing up, although the bacterian theory presents some very plausible ideas and very cogent arguments in its favor it may be claimed with equal fervor that the opponents have established their points so far as experimentation is concerned and when we take into consideration how utterly clinical experience fails to uphold the bacterian theory certainly an unprejudiced mind cannot fail to conclude that, although the disease may be due to minute organisms, they have as yet failed to be discovered and that those already spoken of are either a concomitant with or an effect of the disease.

It attacks alike the rich and the poor the Epicure and the beggar, the king in his palace

blood and at other times it is [illegible]
[illegible] which indicates a [illegible] condition
of the blood. This [illegible] is more com-
mon in secondary than primary diphtheria,
sooner or later after the commencement of
the several symptoms, usually in a
few hours, a small white patch is observed
somewhere in the fauces, most frequently
on some part of the tonsils; this patch
termed the pseudo membrane gradually
becomes firmer and thicker and broader,
its color being usually grayish white but may
vary greatly in this respect.
By the aid of the microscope may be seen
numerous micrococci both in the membrane
& in the subepithelial tissue beneath.
When fully developed the pseudo membranous

exudation has the ordinary appearance of a fibrinous membrane consisting of several different layers.

At this stage the [illegible] attached to the surface of the [illegible]

excoriated and roughened appearance
from removal of its epithelium and
sometimes spots of ecchymoses are present,
at other times it is whitish or unnaturally pale
and others it is purplish or otherwise dis
colored these are the most frequent but
by no means the only conditions of the
[illegible] mucous membrane as we some
times ~~we~~ meet with cases in which there is ex
tensive sloughing and in some very
severe cases we often meet with extensive
gangrene.

In mild cases when the exudate is small
and the penetration into subjacent tissues
slight there is but little danger of septic
conditions arising but in the [illegible] cases
in which the membrane is very large

and lastly imbedded in the mucous membrane beneath so that the lymph is seen [illegible] relation with its mucous surface the [illegible] is ordinarily unchanged or [illegible] [illegible] [illegible]

The muscular [illegible] of the [illegible] in
diphtheria are [illegible] to granulosity
degeneration this organ becoming much
softer and flabbier than in health. This
occurs only in the more malignant
cases and even in these is not constant.
The kidneys are the most frequently affected of
any of the internal organs hence the fre-
quency of albuminuria. Parenchymatous
nephritis with the characteristic hyperaemia
and swelling is the [illegible] form of kidney
disease which [illegible] this disease.
In the [illegible] are found
granular casts. The [illegible] of the occur-
rence of this complication [illegible] some
times it occurs as [illegible] as the second
day but usually not until the close of the
first or beginning of the second week.

changes from white to yellowish or grayish white, the breath now becomes offensive and the flow of saliva slight.

If the attack is a favorable one and the disease is left to pursue its natural course the pseudo-membrane becomes thinner, changes color slightly and falls off about the [illegible] day. In more violent cases the pseudo-membrane near the period for its detachment assumes a blackish hue, hangs in shreds from the surface to which it had been attached; the fauces become gangrenous, the mucous membrane sloughs and breath is fetid.

The submaxillary glands are almost always enlarged and more [illegible] painful to the touch and [illegible] the [illegible] [illegible] [illegible] [illegible] [illegible] and as a consequence the swelling is sometimes considerable making mastication very difficult. Although the [illegible] is rarely as much swollen or as painful in this disease as in scarlatina. In very mild cases when the fauces alone are involved respiration is not at all or but very slightly interfered with; [illegible]

Heart [illegible] may form and cause a
[illegible] or even fatal symptoms.
[illegible]
[illegible]
in the [illegible]
abatement of the inflammatory symp-
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] but usually disappears in a few weeks.

[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [

[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]

required

especially when there is great difficulty [illegible] ones such as

[illegible]

[illegible]

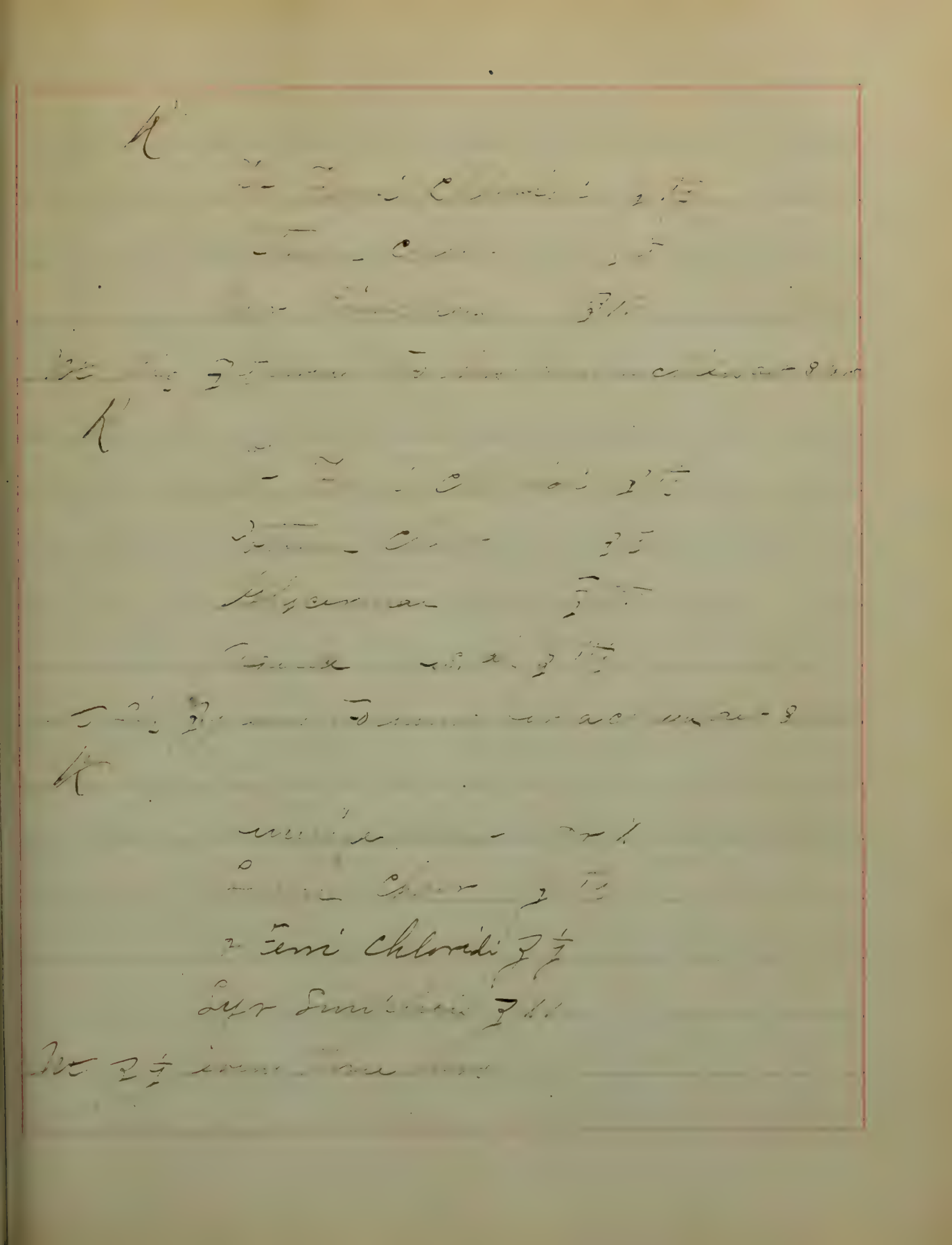
[illegible]

examinations is a favorite study with

[illegible]

[illegible]

[illegible]



℞

[illegible]

[illegible]

[illegible]

[illegible]

℞

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

℞

[illegible]

[illegible]

Ferri Chloridi ℥ ½

Syr Simplicis ℥ ii

[illegible]

Reports of Clinical Cases.

Edmund C. Gibbs.
(Delaware.)

– 1884 –

Records of

Six clinical cases at the University Hospital attached to University Maryland Medical School

- Kept by -

- Edmund. C. Gibbs

Case Number One.

Sarah Lawless aged 10 years applied for treatment at the Dispensary of the Hospital in November 1893 and appeared in Prof. Howards clinic on that day. Her history is this; at the age of five years she had a severe attack of scarlet fever, and two years later was attacked with rheumatism, and dropsy of lower extremities. Professor Howard examined the childs heart by auscultation and pronounced it a typical case of aortic obstruction and mitral regurgitation combined. The patient was very pale and anaemic, and complained of being unable

to occupy the recumbent posture with ease and comfort. Prof Howard then ordered for her the Vinum Ferri Amara in simple syrup, and remarked to the class that the case was one of great interest and he would advise some one to follow up the case. The childs age he said was a good deal in her favor toward recovery. Acting on the Professors advise I learned the childs address, and called to see her the following Sunday. Her mother told me she had suffered very severe pains on lying down the previous night, which appeared to begin over the region of the heart radiating then upward to the left shoulder and down the left arm. They passed away leaving the child in a cold perspiration and were so intense and suffocating as to cause her

to grasp the head-board of her bed so that she might expand her chest, I suppose and avert the impending suffocation. I took this to be an Angina Pectoris from which she was suffering, and though I think this affection is uncommon among persons so young as ten years only, yet knowing it to be present in diseases of the heart—organic— I ordered for her three drops of Amyl Nitrite to be dropped on a handerchief and inhaled during the paroxysm also for mustard plasters to be applied to the chest, and a liberal quantity of stimulants internally brandy, whiskey &c. At the same time I ordered to be given her the Liq. Potassii Arsenitis in three drop doses ter die after meals. I called to see her one hour later and learned that the attacks had

recurred several times during the week in which I had not seen her. I was told that the much vaunted, Nitrite Amyl had no effect whatever in subduing the paroxysms though the mustard and whiskey seemed to give some relief. I then ordered Hoffmans Anodyne forty (40) drops with Magendies Solution two and a half (2½) minums at a dose during the paroxysm to be repeated every half hour until relieved.

On seeing the patient a third time one week later I learned that the Hoffmans Anodyne and Morphia had done no permanent good. I then ordered – the patients pulse being somewhat irregular and rapid – the Fluid Extract of Convallaria majalis (or Lily of the Valley) in dose of five (5) drops ter die: in water.

This was ordered Dec 13th and I did not see

her until January 4th 1884 when her mother applied for treatment at the clinic for Diseases of the nervous System bringing the child with her. I was told she had suffered from no more attacks of pain on lying down upon her back at night or day time but slept as comfortably as one could wish, her heart was much more regular in action and scarcely raised the chest walls at all as it had so markedly done before. I called Dr Holtzmans attention to the child and her history and results of the treatment, also asked him to make an examination of her valvular lesions -cardiac-. He did as requested and told me he heard some mitral but no aortic murmur if present they were very slight. I saw patient last on January 20th 1884; She had had no re-

currence of troubles before mentioned and was improving greatly upon Syr Ferri Iodidi lately given her by Doctor Chunn.
I find the Lily of the Valley is given with greatly beneficial results in the disease Angina Pectoris and for other heart troubles in place of Digitalis. I think it well worth a place in the U. S. Pharmacopoeia as its virtues can not fail to be more widely known before a very great while.

Case Number five

Brouff Tall, admitted into the University Hospital November 27th 1883 with his right leg flexed on the thigh at an angle of about (140°) forty degrees, extension bring an impossibility without the help of surgeons knife. His history as nearly as can be gathered is this; at ten years of age he fell down a flight of stone steps (he is now 20 years old) and hurt his knee very much. He tells me he had a "white swelling", and the doctor who was called in applied fly blisters, and reduced the swelling. This happened several days after the accident. Some time afterward the leg became flexed at the knee joint, and remained so until he came under Professor Tiffanys care. On December 2nd

the tendons were cut which were supposed to limit extension, and the patient put to bed for one week

These means having failed to straighten the limb Prof Tiffany on December 9th decided to excise the knee joint which was done. An anterior flap was made and laid back. Bony achylosis had been set up in the joint. The articular ends of the bones were then sawed off care being taken not to wound the popliteal artery which runs so near to the seat of operation. A drainage tube was placed in the wound opening externally the ends of bones brought together by silver wire, the external wound closed to the front and inner side leaving a

small surface external (and below) to the joint around the opening for the drainage tube.
A long splint was adjusted to the inner side of the limb, and secured by bandages. The wound was well covered with cotton and oakum, it being previously dusted with Iodoform, and the leg nicely swung from the ceiling and kept extended by means of a "Smith Anterior splint" apparatus. The wound unclosed was dressed every second day for two weeks by means of Iodoform powder and Cotton, and washed out with a solution of Iodoform in Alcohol a glass syringe being used & introduced into the drainage tube for the purpose of removing any pus which

might accumulate. The thirteenth day after the operation Prof. Tiffany removed the splint and bandages grasped the ankle and twisted the limb when to his surprise he found union has taken place quite strongly between the excised ends of bone. The splint on the inner side of the limb was put aside and extension continued by means of the Smith Anterior splint alone. The variations of temperature were not very marked except for several days immediately following the operation then it did not range or reach more than 102°⅘. The pulse rate was somewhat remarkable fluctuating between 108 and 120 beats per minute morning and evening respectively for a week. Patient suffered from constipation relieved by

castor oil. The discharges from the wound were of a good character (laudable pus) throughout the period during which I was required to dress it, and continue to be so. I visited him this afternoon Jan: 23 1884 and found him doing finely in excellent health and spirits and only awaiting the firm union of bone before his discharge from the hospital.

I find that I have neglected to mention the removal of the patella, and that the sawed ends of bone were brought together firmly fixed by means of silver wire. Both most important steps in the operation. The subject was a favorable one for the operation, the joint being deformed in consequence of disease, and the patient young.

Case Number Three. Amputation Symes

William Nevitt aged 35 years.

Admitted into University Hospital Nov: 19th 1883. suffering from disease of his tarsal left bones. History: Pain was first felt in the foot on the 13th of May 1883. On the 23rd of May he went to a surgeon (in Chicago) whose statement in regard the patients condition at that time I am enabled to give. The surgeon states that the patient appeared to have an abscess forming over cuboid of the left foot. Poultices were directed and in two days the abscess was freely opened, when it discharged considerable pus and blood. A history of previous injury and specific trouble of some months standing was obtained by the Chicago surgeon, the latter being (in the opinion of

himself, and a colleague the origin of the trouble. After the opening was made the wound became fungus like, and turned to a dark color. It was then burned with caustic potassa. Shortly afterward dead bone was discovered, and two weeks afterward the cuboid bone removed. He was then put upon 30 grain doses Potass. Iodidi and began to improve. The wound did well up to about August 24th when appearances indicated an extension of the disease and on September 13th sinuses were found leading to the external cuneiform and scaphoid bones. The patient finally admitted for treatment at University Hospital as before mentioned.

On Sunday morning Nov. 25th 1883 her

was placed on the operating table, (having previously undergone a constitutional treatment with the "house specific") given Ether and foot scraped (or "reamed") out by means of an apparatus designed for the purpose attached to a dental engine, with a view of saving the foot. The wound was washed with carbolized water, dusted over with Iodoform and oakum, and carbolized oil used for external dressing. This was continued for several weeks with apparently good results. On December 27th the wound began to change to the worse, and continued to grow so. Prof Michael decided on Jan: 11th that the foot could not be saved, and he then amputated the foot at the ankle joint. He found the "calcis" bone to be

very much diseased. The ends of the tibia and fibula were found to be quite soft and bones on sawing them off. This condition (as he, Prof Michael) then remarked, may necessitate an amputation highed up the limb at a later period. Syrogoffs amputation was not performed for two reasons, viz: First, because the os calcis was found to be diseased and, second the amputation as performed would allow a better adjustment of an artificial foot. The temperature of the patient on evening of the first day was 102°(F) at same period of second day 103°(F) on evening of third day 104°(F), but commenced to decline gradually afterward reaching 100°(F) on the fifth day after the operation never rising about this point afterward. The pulse rate

has been high from the first (since the operation) being never below 120 per minute and respirations nearly normal ranging from 18 to 25 per minute. The discharges from the wound have been good in character and very free. The wound on this the eighteenth day after the date of operation looks very well, and the patient able to go about the ward on his crutches, and only awaits a return of bodily strength to allow him to return home.

Case number Four

Amputation for Disease

Edwin F. Vaughan. aged 28 years

This patient applied at the surgical department of the Hospital Dispensary for treatment of a swollen knee. History - Patient fell from a scaffold on this knee three years ago. It immediately commenced to swell and was rubbed with liniments of some kind. He was able to walk on the affected limb until June 1883, but has suffered more or less ever since he hurt it. Dr Gorgas and Bond in charge of the surgical department recognized symptoms of synovitis in the knee, and Dr Gorgas applied a plaster bandage to the knee, assisted by myself. This gave him so much pain

that he had it removed by a friend three days later

Dr Bond and Gorgas visited him at his home several times, and found the pains very intense requiring hypodermatic injections of Morphia to subdue them. Ice was applied to the joint also hot poultices, and an evaporating lotion of Muriate Ammonia and diluted Alcohol. The poultices appeared to do more good than any other application. After the splint was removed the posterior thigh muscles contracted, and flexed the leg on thigh. These contractions were spasmodic in character, and gave the patient great pain

Dr Gorgas applied a starch splint but it did not give much relief to the patient

On December 15th 1883 Vaughan was brought to the University Hospital in the ambulance suffering intensely and was given a bed, and the limb put up in an anterior splint under Chloroform.

This treatment was continued for a time but with no good results. The knee was blistered with a view of giving relief, and some was obtained, but 'twas not permanent. Prof: Michael finally decided to remove the limb in the lower third of the thigh on January 25th 1884.

The first incision let out a large amount of pus that had collected above the joint a portion of skin covering this abscess was used to help cover the stump. A mixed operation was performed viz: a skin flap

with a circular cut through the muscles where the bone was to be sawn through. The incision was carried a little lower down to the inner, and posterior side of the limb (an elliptical incision. so as to allow for greater retraction at that point. The flaps was brought to-gether nicely (and united with silver wire) and in a nearly vertical direction to favor free drainage and a rubber tube inserted. Oakum soaked in a solution of Bi Chloride of Mercury 1 grain to 4oz water was used to cover the stump & retained by bandages. The bones making up the joint was divided with a saw when the cartilaginous extremities were found to be disorganized and thrown into folds and

also a point of ulceration was seen on one of the condyles.

Temperature on evening of the first day was remarkably low 101 3/5° Pulse rate same time 120 and Respirations 20 per minute. On the evening of second day 102 3/5° temperature falling next morning to 99 2/5°, with pulse and respiration nearly normal. There was some vomiting and retching during first few days occasionally, but this was relieved by small doses of Calomel 1/5 grain every hour. Dilute Nitrohydrochloric 5 grs per dil. with one ounce of whiskey were ordered. The patient complained of rise of temperature every afternoon between the hours of two and four o'clock. Said he had been so troubled for some

time past. The stumps continued to look well for some time but lately the flaps have retracted considerably above the end of the bone although they were cut quite long enough at the period of amputation. This will be remedied later by extension, and pressure on the muscles above the exposed bone provided the patient does not die from other complications which are now well marked viz: a large abscess over his sternum now discharging and phthisis. which latter is now well marked particularly. His temperature from these complications has reached 104°/ requiring Muriate Ammonia and Urea to bring it down, occasionally injected hypodermically.

Case Number Five.

Bernard Herzed age 22 years applied at Prof Miles clinic for the treatment of "wrist drop" on Jan 2nd 1884. The patient was questioned in regard to his occupation &c. but as 'twas ascertained that he had not been working in lead, and that he could not have been poisoned in this way lead paralysis was excluded from being the cause of the trouble. Again upon more careful examination the supinators of the fore arm were found to be involved in the paralysis, and they are spared in lead wrist drop from lead poisoning. The cause of the trouble was supposed to be a pressure on the nerves supplying the

extensors and supinators in question viz: the musculo-spiral nerve, by a crutch the patient had been accustomed to use. The flexors were uninjured and active. There was some wasting of the injured muscles but they soon began to respond to the galvanic current one pole being placed over their origin at and above the external condyle and the other made to play over the course of the muscles injured. This treatment was continued daily for four weeks when then muscles first began to return to power slowly ~~until~~ and at the end of six weeks the patient has quite recovered to himself their formed usefulness.

Case Number Six

Roy Thomas aged 10 years
Admitted to University Hospital Feb 1 30
1883. He had symptoms of stone in
the bladder for 6 six years previously
but no operations had been performed,
for his relief. On October 1st 1883
Prof Tiffany having satisfied himself
that a stone was in the bladder, by
means of a "sounding board" and
from other symptoms, decided to
operate and remove it. Ether was
administered and Lithotomy performed
& a large stone phosphatic in char
acter was removed. The operation was
performed at 1 o'clock P. M. at 5 o'clock
the same evening a recurrent haem-
orrhage set in and it nearly termina-

ted the patients life. (Doctor West - the resident physician to the hospital - was summoned and he applied a shielded catheter in the opening into the bladder & checked the haemorrhage effectually. The patient passed a restless night following the operation and got but little sleep. He was given a milk toddy (which he relished greatly) and some beef tea next day. This treatment was continued for some time, with good result. The wounded bladder was washed out daily for three weeks, until his final discharge, with carbolized water and anointed with carbolized oil and occasionally washed with a weak solution

of nitric acid to dissolve phosphatic concretions which collected upon it. The bladder discharged a flakey and dark fluid at first when it was washed out by means of a syringe attached to a drainage tube. The patient had a high temperature in the early stage of his treatment, but twas only occasional and disappeared under Quinine and Iron the latter given for an attendant anaemia. A return to some solid food was allowed after the fourth day; the shorted catheter was removed on the fourth day. Castor oil was given for constipation and an occasional enema. He was finally discharged as 'cured' and sent

to his home in North Carolina
I received a letter from his father
some time after his discharge which
stated that the wound had nicely
healed. and the patient doing re
markably well.

Robert Morfit age Thirty seven was admitted into the Hospital, on August the Seventh Eighteen hundred and Eighty three with a fracture of the skull, and the following indefinate history. viz.

Patient being under the influence of liquor and put himself on the R. & O. R.R. Track, and was struck by one of the Engines.

The only make of injury was on the left side of the Cranium about two inches above the Ear, at the posterior border of the Parietal bone, the laceration in the Scalp being about two and one half inches long.

The patient being examined by Prof. T. J. Jarvis, who was then the visiting physician, found that a piece of bone was driven into the interior of the skull from the

external violence in the shape of a
the median line of fracture being
depressed.

The only operation that could
be resorted too was Triphining in
order to relieve pressure upon the
Brain and its Membrane.

The operation was done with a
great deal of skill and care, and also
very successful on the part of the
operation in removing the piece of
bone, there was also found a large
blood clot under the seat of frac-
ture which was also removed, the Dura
Mater not being injured, when the
piece of bone had been Triphined the
wound was found to be a compound
one, several fissures were found they
spread from the open surface over
the Cranium the parts were then

held in position by wire sutures
and the scalp brought in opposition
but leaving a [illegible] at the bottom.
The wound was then dressed by dusting
over it Iodoform and Ochum and
a bandage. Patient was then put
to bed and given grij of Calomel every
three hours until bowels were moved.
Wound was kept clean by washing
twice daily with a solution of Carb-
olized water, and dressed with Iodoform
Ochum and bandage, this direction
was followed out carefully by a
clinical assistant.

Patient done remarkable well
up to August the Twenty fifth,
although up to this time he had not
yet recovered from want of mentle
ability, and was very troublesome, would
not allow a dressing remain on his

head and had to be tied down in bed, but after the twenty fifth day of August the patient became quiet and passed into a complete and full stupor which lasted until September the second when death ensued. From the time on after full and complete stupor existed, he was taken with Paralysis on the left side, which was due to some lesion on the right side of the brain, but as the wound was in perfect healthy condition and no retention just the diagnosis of course was obscure.

The Post mortem examination which was held by one of the City Coroners and Dr. West and on removing the top of the skull nothing abnormal was found, but on cutting open the Dura Mater a large quantity of serum

and [illegible] escaped [illegible]
[illegible] the entire surface of the brain
thus the cause of death was attribu-
ted to Cerebral Meningitis the cause
this being somewhat obscure, but
was allowed to be due to External violence
which he produced by his extreme
violence and restlessness, during his first
Eighteen days, which were so outrageous
as to have him tied in bed as previous
stated.

So far as Medical and [illegible] for
the first Eighteen days everything proved
to be a success but through his violent
conduct death was the result.

During the uncomfortable days
the patients life his vital record varied
as follows; for the first Seven days
it varied from 99 2/5 to 101 3/5, later being the
temperature of the operation, then for

certain time it remained about or nearly normal, until the twenty sixth day of August when he was then in a complete coma, when his temperature varied from 101 to 104 3/5 higher in the evening then in the morning. Pulse likewise varied day of operation 104 to 106 and during the intermediate time it was nearly normal. Until the seven last days of his life when temperature was highest from 102 to 104 3/5. Pulse from 120 to 140 per minute.

Patient died in the Evening about four o'clock his morning record was Temp. 101 1/5 Pulse 128. Respiration 40

Mr. Dolan was admitted into the Hospital complaining of headache, slight chills and remarkable fever and anorexia, he was suffering with a loss of appetite for four days previous to his sickness, he also had a general loose of vigor and energy and weakness, diagnosis was made by Dr. Atkinson as Typhoid. Typhoid fever is an acute infectious disease characterized by an eruption of Rose colored spots chiefly over the abdomen with tenderness and gurgling in the right iliac fossa, accompanied with diarrhoea. First weeks sickness, he had a very hot skin, a frequent pulse, coated tongue, headache and diarrhoea. On the Seventh or Eighth day the eruption made its appearance over his body, and were so remarkable almost like measles.
During the second week the above symptoms were very much exagerated

[illegible], pulse was more depressed. Tympanitis increased, tenderness over the abdomen, gurgling in right iliac fossa, the rose colored spots were so marked that Prof. Atkinson remarked, that he never saw them more developed, indeed the were well marked over his chest and down his thighs, he was very delirious and stupefied, and had a slight cough. Sordes now made their appearance upon the teeth and lips, tongue was very heavy, coated, diarrhoea continued.

During the third week fever changed from continued to remittent evening temperature higher than in the morning, pulse likewise varied, i.e. higher in the evening than in the morning.

During the fourth week the fever remitted decidedly, sometimes almost normal in the morning. Pulse became less frequently and more full, the tongue began gradually to loose its heavy coating and became clear, so likewise did the abdomen lessen in size, the tenderness and the gurgling in the right iliac fossa disappeared. And the diarrhoea stools began to cease and the patient passed into a stage convalescence, during this time patient became very much emaciated which lasted for several weeks.

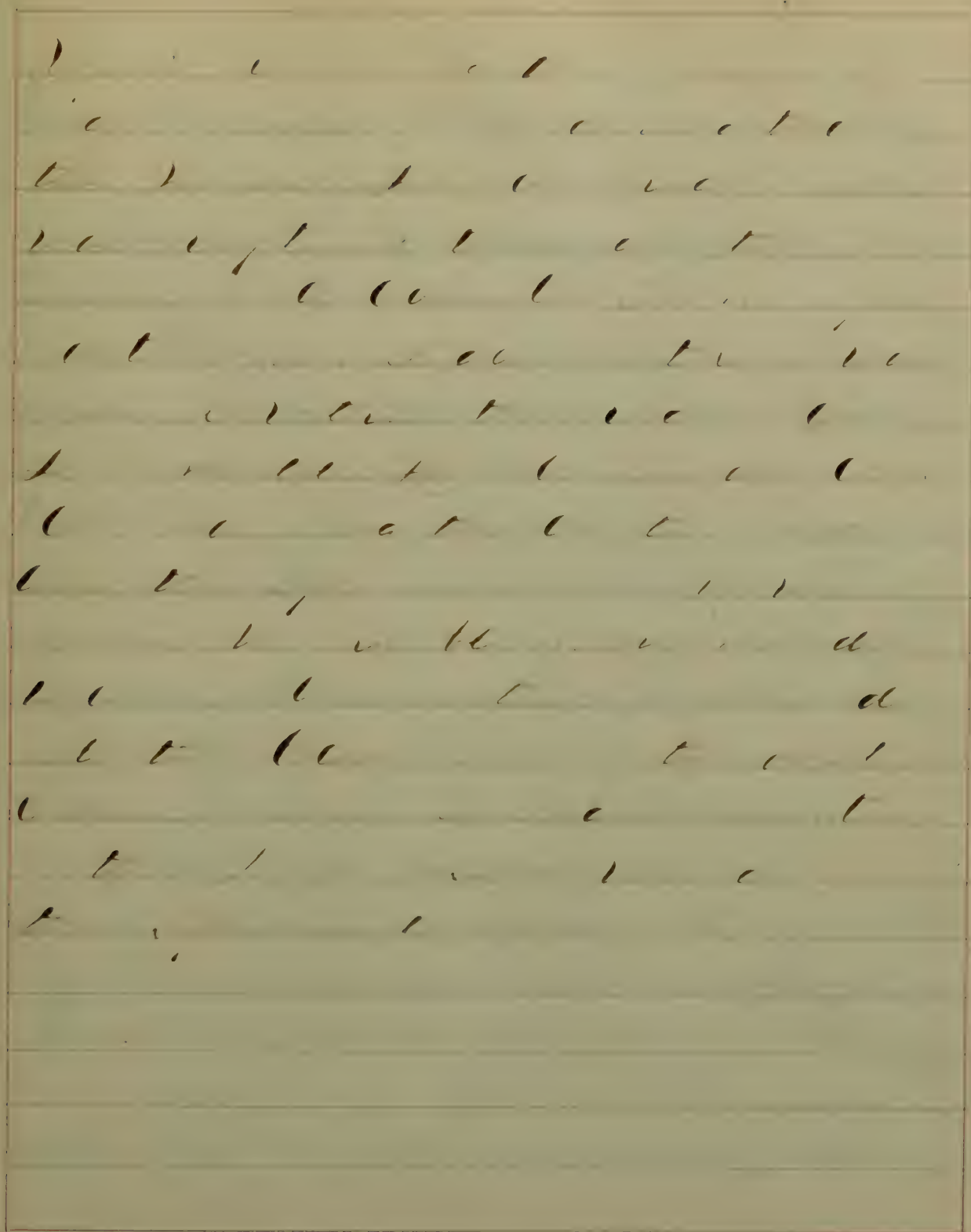
Treatment

No Specific treatment. Intelligent nursing, pure air, and quiet. disinfecting of the urine and stool is very advicable, patient requires liquid diet at intervals

of every two or three hours.

The present popular so called "Specific treatment" of this disease consists of the administering every second evening, until four doses are taken, of Hydrargyri Chlor. mite gr. vij. which seemingly lessen the frequency of the stools in the later stage of the attack, although slightly increasing them at the time.

This patient was put on Sulphate of Quinia and Morphia. And to check his diarrhoea he was given Subnitrate of Bismuth combined with Sod. Br. & Opii and Turpentine Stupes to relieve the Tympanites, to quiet his Restlessness and delirium, he was given Bromide of Potassa. His bladder and bowels also received daily attendance.



Mrs. Henrietta Mitchel was admitted into the Hospital on the Fifteenth of September complaining with a Uterine Epethelioma.
Mrs. Mitchel is a medium strong and healthy woman, and Thirty Two years of age and living in Yorktown Virginia, was married in her Seventeenth year, during her single life she was always healthy, during her married life up the present time she gave birth to two children.
After her second child, which was borne last August Eighteen hundred and Eighty three Fourteen years ago, and during her time of labor she was attended by a midwife; and from thence on she had

never been feeling very well sometimes been sick as to be taken to bed.

First appearance of sickness was the complaining of severe pain during her Catemina and followed by and was accompanied by fainting spells. her monthly sickness consisted of a successive amount of white discharg.

After being sick for three months then at her regular time she had a very small amount of discharge it at the same time being of a fearful dark color as She described. This ended her monthlies for some time.

Then she applied for medical aid and was some what relived and brought back her

Monthly sickness by on disposing herself she was again thrown into her former condition.

Then she began to feel a dull pain in the left Iliac Fossa this pain begin to increase getting worse and worse then finally she was advised by her family Physician to the Baltimore Infirmary. when on the Sixth of September Doctor Thurston operated on her by removing the Epithelioma by cutting it and scraping it. when the doctor had removed it to his satisfaction parts which then looked very raggy were washed and cleansed. And then Tamponed with Cotton saturated with Subsulph

ate Iron.

Her vital Record are as follows;

On the evening after operation Thermometer showed Ninety Nine and one fifth (99 1/5) began to go up until it reached One Hundred and One and one fifth (101 1/5) this being the highest point and being the third day after operation next morning the temperature had again fallen to Ninety Nine and two fifth (99 2/5) then it begin to vary until the tenth day when the Thermometer again rose to One Hundred and two fifth (100 2/5)

Her pulse on the evening after operation was One Hundred (100)

Pulse began the same way as the temperature rise gradually until the third day when it was found to be One Hundred and Twenty (120) to the minute upon which patient was then given gtt X ✱ of Digitalis every three hours and on the following morning the fourth day pulse had fallen to One Hundred (100) and during the day rose again Eight beats as an evening record therefore patient was still kept on Digitalis and reduced pulse again to One Hundred (100) After that time pulse began to vary until the Ninth day when pulse found again to be One Hundred and Twelve (112)

Respiration varied from Twenty to Thirty six

Treatment.

Evening before operation she was given three Compound Cathartic Pills and fifteen grains of Cinchonidia.

Directly after operation xxv drops of Deodorized Tinct. of Opium and grs. xxv of Bromides at bedtime and a Bowel Wash. On the second day she was given xxxij grs. of Sulphate of Quinia, gr. j of the Sulphate of Morphia. ft. Capsules viij. one every three hours, and put on good diet and Whiskey.

The Third day the Tampon was removed and found the surface very little bleeding sloughing slightly.

She was again Tamponed

And left their for three days more when it was then removed after removing the first Tampon temperature rose upon which she was given Digitalis. for the first four days her water was drawn from her twice a day.
In the meantime she was also put on Castor Oil, Mucilage Acacia, Cinchonidia,

Patient got up walked about the room on her Eighth day of suffing.

Patient left Hospital on the Nineteenth of September, Thirteenth day after the operation though not perfectly well yet.

Mr. Nick Mills age thirty 30 was admitted into the Hospital on May the 5th with the following history.

Being a car driver, and driver of the last car entering the Druid Hill Park Stable and while thus coming in with his car and having put to a side everything in proper order, he went into his car seized a hammer and hit himself on the head, producing a fracture of the Left Frontal bone.

He was discovered immediately N.B. having committed the act from the noise of his [illegible]: On arriving at the destination he was found having the hammer grasped with both hands, immediately a physician was sent for and he removed a piece of bone some what larger then a half

[illegible] triangular in shape and being perfectly loose.

The history of the patient when arriving at the hospital was as follows;

A large triangular piece of the frontal bone was dashed in and was removed by Dr. West, the resident physician, from which wound then exuded a small amount of blood and a small portion of the lacerated cerebral substance.

Patient was unconscious on his arrival, but his breathing was pretty regular, his temperature in the morning showed 104½ and the evening record 104. his morning pulse was 50 evening 72.

May the 6th unconsciousness still existed, with a constant nervous

twitching of the muscles of the body
May the 7th temperature in the morning
103 and evening temperature 105 showing
remarkable fever, his pulse record in
the morning was 74 and evening 84
condition same as May 5th i.e. uncon-
scious, but no sign of Motor Paralysis
but the nerveous twitching continued
Patient died May the 8th at 4 o'clock
in the morning.

J. L. Berthold,
Pennsylvania,

Thesis--
To the Faculty of the University of Mary-
land, Baltimore, Md. 1884.